GAS JOURNAL

LIGHT . HEAT . POWER . BYE-PRODUCTS

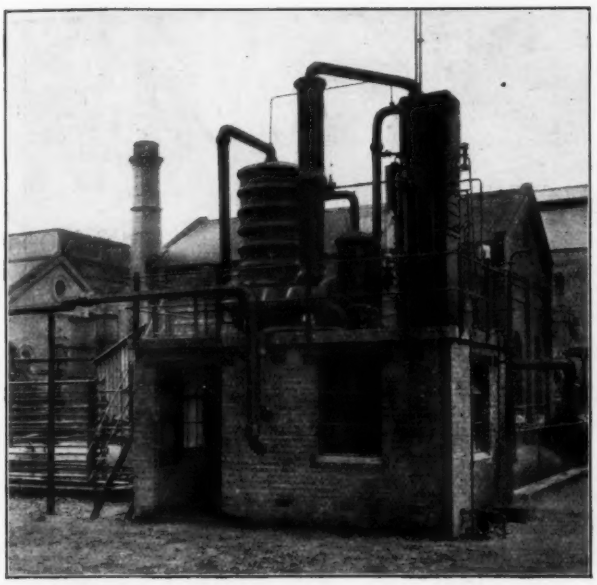
[Founded in 1849 as the "Journal of Gas Lighting."]

Vol. 203. 85th Year. LONDON, SEPTEMBER 27, 1933. No. 3671. Price 1s.

50,000 Gallons of BENZOLE

produced daily by

SIMON-CARVES BENZOLE PLANTS



Simon-Carves Benzole Plant at North Shields for the Newcastle-upon-Tyne and Gateshead Gas Co., recovering 275 gallons per day of 90% Benzole at 120° C.

Main steam and water feeds on Simon-Carves Benzole plants are thermostatically controlled, thus only occasional attendance is required on the plant.

Over 30 years' experience in the construction and operation of benzole plants ensures dependable and satisfactory operation.

Write to us for full particulars. Our expert advice is at your service.

SIMON-CARVES LTD

CHEADLE HEATH, STOCKPORT

INSULATING BRICKS — RECUPERATOR TUBES

Special semi silica quality for Segmental Retorts with no Expansion or Contraction at 1400° C.

HARRIS & PEARSON, LTD., STOURBRIDGE, ENGLAND

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LOCOMOTIVES of all Sizes and Gauges specially constructed for Main and Branch Lines, Contractors, Docks, Gas-Works, Collieries, Iron-Works, Brick and Cement Works, &c. Locomotives of various Sizes always in progress for early delivery.

Photographs, Specifications, and Prices on Application.

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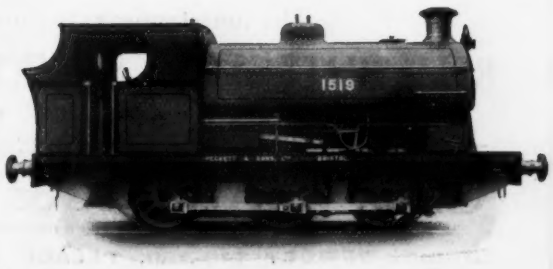
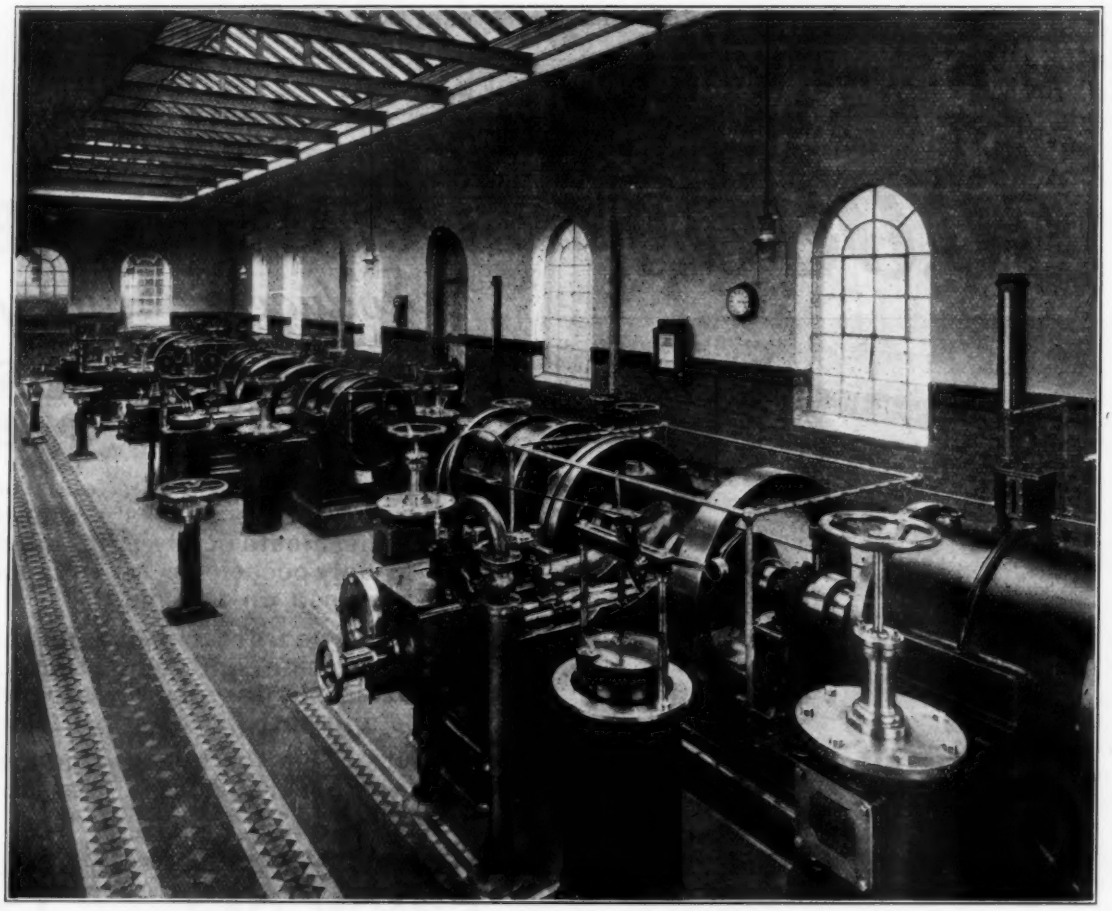
Telegraphic Address: "PECKETT BRISTOL."

London Representatives: FERGUSON & PALMER, 9, Victoria St., Westminster, S.W. 1



EXHAUSTERS

Waller's 3 and 4 Blade Type



Six Waller 4-Blade Exhausters at a London Gas Works.

WALLER'S 4-BLADE EXHAUSTERS (Patented by George Waller in 1889) have gained a premier position with Gas Engineers throughout the World.

Since our patents have expired, other makers have offered this type, but our long experience and special plant ensure a more perfect machine.

Small Space occupied.
Low peripheral speed.
Very steady gauge maintained.
No gears to get noisy.
Perfect governing control.

COMPLETE RANGE OF SIZES FROM 500 TO 500,000 CU. FT. PER HOUR

The outstanding features of all our products are :—

RELIABILITY—LONG SERVICE—and LOW MAINTENANCE COST

SEND US YOUR ENQUIRIES

GEO. WALLER & SON, Ltd. PHŒNIX IRON WORKS, STROUD, GLOS.

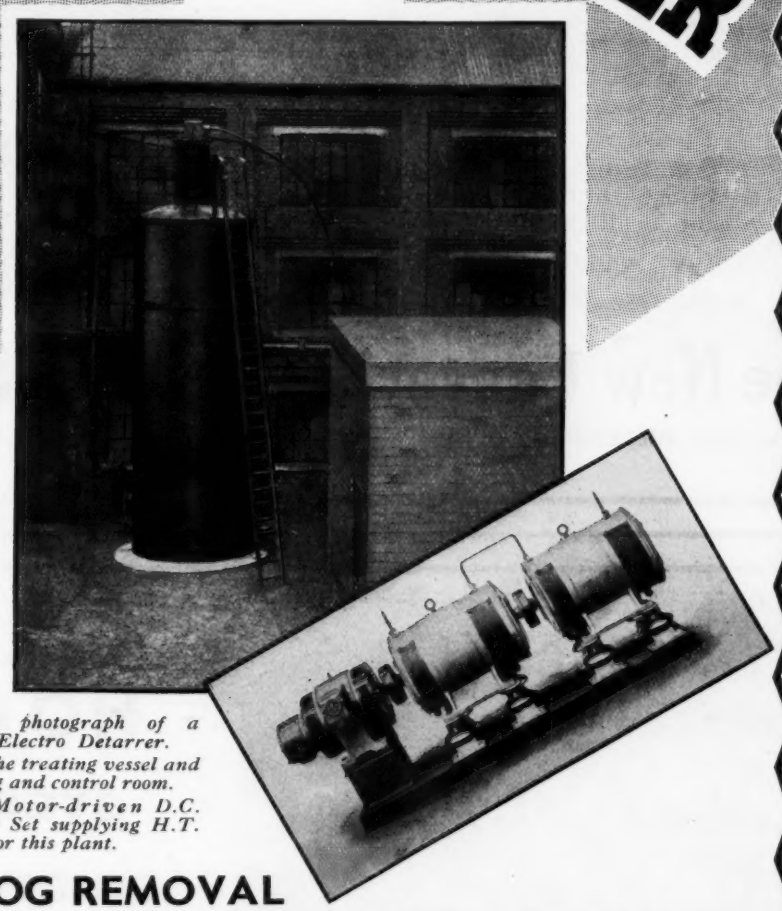
Telegrams: "WALLER, BRIMSCOMBE." Telephone: 10 BRIMSCOMBE.

LONDON OFFICE: 149-150, PALACE CHAMBERS, S.W. 1. Telephone: WHITEHALL 5526.

AGENTS FOR SCOTLAND · MESSRS. MILNE & MITCHELL, 75, BATH STREET, GLASGOW C.2.

W·W-D
WHESSOE·WOODALL-DUCKHAM

ELECTRO DETARRER



★ *Composite photograph of a W.W-D. Electro Detarrer. Above: The treating vessel and generating and control room. Right: Motor-driven D.C. Generator Set supplying H.T. Current for this plant.*

TAR FOG REMOVAL
by the W.W-D. ELECTRO DETARRER

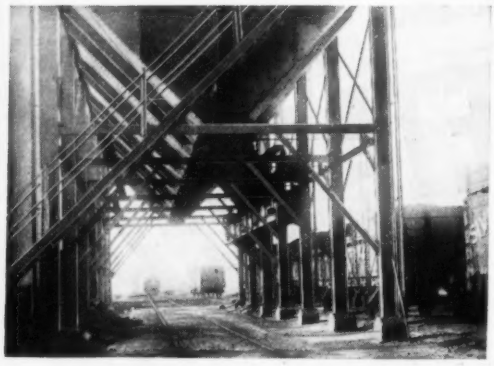
Electrical precipitation is cheaper in the long run than any other method of tar fog extraction—there is little value in extraction at less than 99% efficiency. The capital cost of the W.W-D. Electro Detarrer is offset by the large savings it effects by reason of its guaranteed high efficiency. Low running costs and low back pressure are additional reasons for installing this modern type of tar extractor.

A number of leading British gas undertakings have the W.W-D. Electro Detarrer in use or under construction. Study the special features of this plant by sending to the makers for an illustrated technical booklet giving full details.

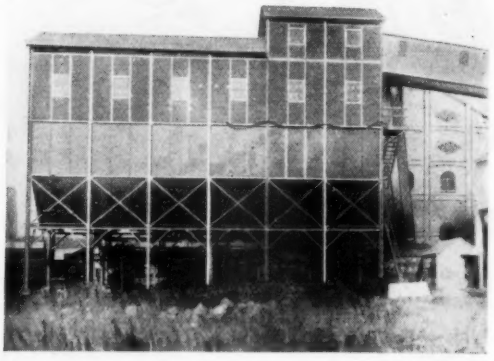
ELECTRO W.W-D. DETARRER
WHESSOE WOODALL-DUCKHAM
INCORPORATING ENGLISH ELECTRIC HIGH TENSION PLANT

THE WHESSOE FOUNDRY & ENGINEERING COMPANY, LTD.
Sole Makers DARLINGTON

MODERN COKE SCREENING AND GRADING PLANTS



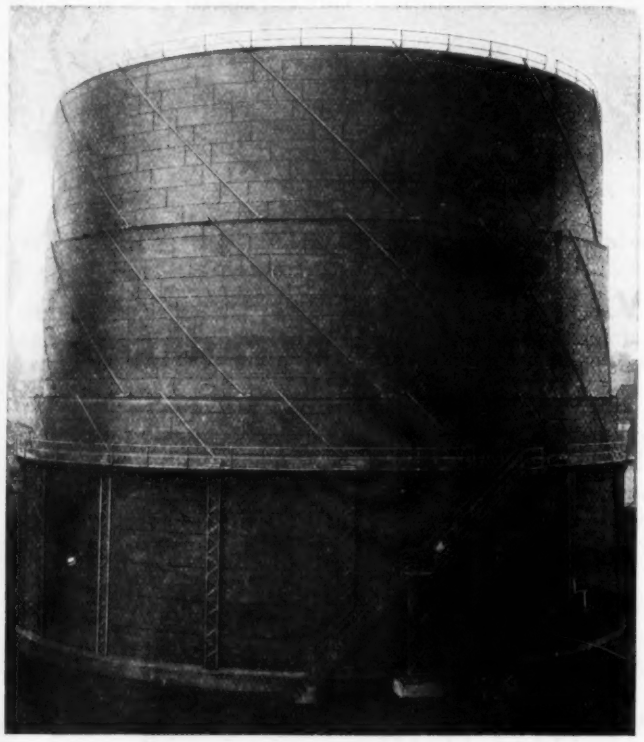
All plants designed to include modern up-to-date units.



Our Technical Staff is at your service to prepare designs to suit local conditions.
Your enquiries are invited.

The New Conveyor Co., Ltd., Smethwick

Telephone: 0801 SMETHWICK — Near Birmingham — Telegrams: "APTITUDE, BIRMINGHAM."



ERECTED AT BANGOR, CO. DOWN, IRELAND.
CAPACITY 750,000 CUBIC FEET.

GAS HOLDERS

WITH OR WITHOUT
STEEL TANKS
WITH
GUIDE FRAMING
OR
SPIRAL GUIDED
WITH
MILBOURNE PATENT SELF LUBRICATING ROLLER CARRIAGES
AND
MILCOT PATENT LADDER.

WATERLESS (KLÖNNE) GASHOLDERS
HIGH PRESSURE GASHOLDERS

C. & W. WALKER LTD.

DONNINGTON, Near WELLINGTON—SHROPSHIRE.
LONDON OFFICE - 70, VICTORIA ST., WESTMINSTER, S.W. 1.

The new

"SUNSHEEN"

COLOUR FINISHES

The quality and richness of the new "Sunsheen" Colour finishes place "Regal" Gas Fires in a class of their own. The skilful way in which the beading on the back and canopy has been picked out in burnished gold or silver indicates the care which is taken in producing these fires.

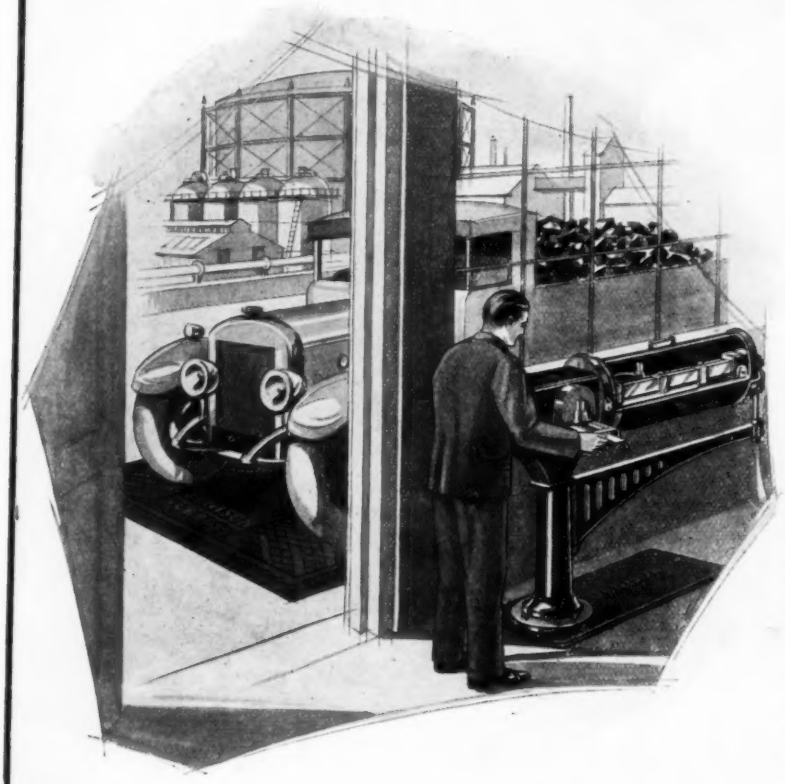
"REGAL"

GAS FIRES

in

"Sunsheen" Colour Finishes

ARDEN HILL & CO. LTD., BIRMINGHAM. Radiation



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Adopt the

"DENISON" TAPE & TICKET SYSTEM with equilibrium control

No more disputes, only accurate records can be made.

Weigh the load. Close cover. Insert ticket. Write the name. Pull handle.

YOU THEN HAVE A DELIVERY TICKET FOR THE DRAYMAN AND A COMPLETE RECORD IN THE MACHINE. THE TAPE IS CHANGED TO A SUITABLE HOLDER AND POSTINGS MADE DIRECT TO ACCOUNTS.

SAML. DENISON & SONS, LTD., HUNSLAKE, LEEDS

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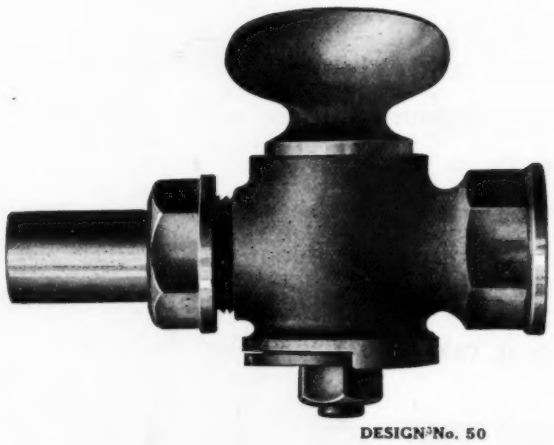

DESIGN No. 50

GUN-METAL MAIN COCKS

GEORGE ORME & CO.
(Branch of Meters Ltd.)
ATLAS METER WORKS
OLDHAM

We shall be pleased to receive enquiries for
SAMPLES & PRICES

They GIVE and TAKE to Road and Load

The Progressive rear springs have auxiliary leaves which come into action in accordance with varying loads.

A Morris-Commercial chassis is practically proof against shocks. The worst ones never reach the chassis at all—they're absorbed by these progressive rear springs. Not only are spring breakages prevented—the load is saved as well.

CHOICE OF 4 OR 6 CYLINDER 25 H.P. UNITS FORWARD OR NORMAL CONTROL

MORRIS-COMMERCIAL VEHICLES INCLUDE ALL THESE MODERN FEATURES

4-speed Twin-top Gearbox. Triangulated Frame Bracing. Lockheed Hydraulic Braking System. Progressive Rear Springs. Fully Floating Rear Axle. Group Lubrication. Unique interchangeability of Parts. 12 Volt Lighting and Starting Set. Dipping Beam Headlights. Electric Direction Indicators. Chromium Plated Radiator and Lamps.

30-CWT., 2-TON AND 3-TON. CHASSIS FROM £198.

Send for Catalogue G.J.

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ADDERLEY PARK 4 OR 6 BIRMINGHAM 8.

THE LARGEST BRITISH MANUFACTURERS SPECIALISING EXCLUSIVELY IN COMMERCIAL VEHICLES

RADIANT-PANEL GAS HEATER ADVERTISING

will increase your gas sales if you will co-operate with a local campaign

The "Radiant-Panel" Heater has established itself in many professional and business communities.

Careful thought has been given to the needs of Gas Undertakings in preparing our advertising matter to bring these Heaters before the public.

On September 27th a National Advertising Campaign commences directing attention towards the utility and attractiveness of these Heaters.

A useful booklet giving details should be in your hands, if not, a postcard will bring a copy by return.

Advertisements as on the opposite page are appearing in the "Daily Mail", "Sunday Express", "Punch", "Tatler", "Country Life", "Ideal Home", "Homes and Gardens", and "Home Beautiful".

To participate in further gas sales, write to:

FLAVELS of LEAMINGTON
Stove-Makers since 1777.

For Neater Heating
RADIANT-PANEL
GAS HEATER

Unobtrusive, providing ultra efficient radiation from the flat black panel. Made in 3 designs, in 3 sizes, and 8 finishes, at prices from £3 to £18 : 18 : 0

When in London call and see the heaters working at THE WELBECK STREET FIREPLACE GALLERIES, a permanent exhibition consisting of eight galleries devoted to Fireplaces and Stoves specially selected for people of discernment. You are cordially invited to inspect and will not be importuned to purchase. 38 WELBECK STREET, LONDON, W.1

Obtainable from all Gas Companies, Ironmongers or Stores.

150 YEARS REPUTATION STANDS BEHIND THIS FLAVEL PRODUCTION

Write for copy of attractive publication "The Secrets of Neater Heating" and illustrated Catalogue from Sidney Flavel & Co., Ltd., The Foundries, Leamington.

Reproduced from an advertisement appearing in "Daily Mail", "Sunday Express", "Punch", "Tatler", "Country Life", "Ideal Home", "Homes and Gardens" and "Home Beautiful".

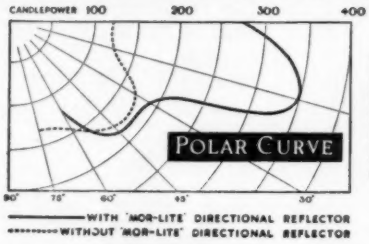
To participate in further gas sales, write to :

FLAVELS of LEAMINGTON
Stove Makers since 1777.

DOES 100% INCREASE IN ILLUMINATION APPEAL TO YOU?

TYPE G LANTERN WITHOUT MOR-LITE REFLECTOR

The Parkinson
MOR-LITE DIRECTIONAL REFLECTOR FOR GAS LIGHTING


CANDLEPOWER 100 200 300 400
POLAR CURVE
90° 75° 60° 45° 30°
WITH 'MOR-LITE' DIRECTIONAL REFLECTOR
WITHOUT 'MOR-LITE' DIRECTIONAL REFLECTOR

The curve shows the Directional Increase in Illumination at no extra cost for Gas

TYPE G LANTERN WITH MOR-LITE REFLECTOR

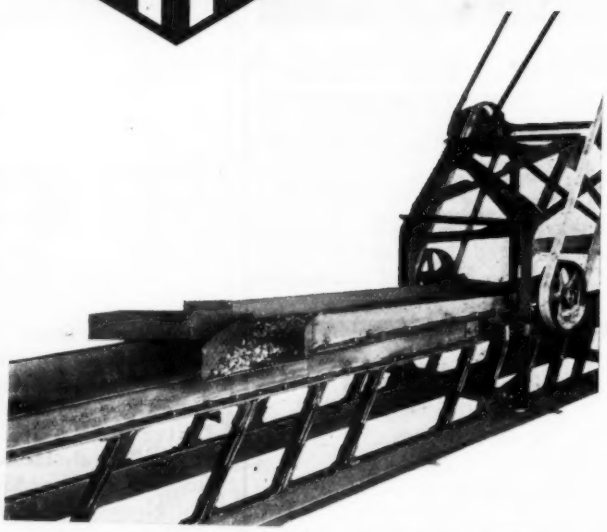
1. THE "MOR-LITE" DIRECTIONAL REFLECTOR increases the candle power by reflection at low angles where light is most needed.
2. Using a Twin Burner with No.2 medium mantle there is a directional increase from normal 150 c.p. to over 350 c.p. in illumination.
3. Can be fitted in a moment. Can be instantly adjusted both vertically and horizontally to give maximum light service.
4. Wing reflectors can be adjusted by wing nuts to meet every need.
5. Wings lift off instantly for Lamp Cleaning and are replaced without disturbing adjustments.

Send for sample and price list.

W. PARKINSON & CO., BIRMINGHAM · LONDON & BELFAST

INCORPORATED IN PARKINSON & COWAN (GAS METERS) LTD.

COKE SCREENS.



"H.H." COKE SCREEN AT WOLVERHAMPTON GAS WORKS.

THE ONLY LOGICAL WAY IN WHICH TO SCREEN COKE IS TO SEPARATE THE LARGER SIZES FIRST AND TO ELIMINATE THE BREEZE LAST OF ALL. This is the method we adopt in the "H.H." Coke Screen, which is characterised by very high screening efficiency, over 95% being obtained in actual practice. The power consumption of this screen is much lower than that required for rotary screens, while the machine acts also as a conveyor, thus facilitating distribution of the graded products into bunkers. ***The only moving part is the shaft carrying the two unbalanced pulleys which actuate the screen,*** there being no cams, rockers, or other complicated parts to get out of order. These screens are built in lengths up to 25 ft., two or more screens being arranged in series where greater lengths are to be covered. Each screen is designed to suit the particular number of grades and the distribution required.

HUNTINGTON, HEBERLEIN & CO., LTD.

47-51, KING WILLIAM STREET, LONDON, E.C. 4.

E.C.C.

ELECTRICAL PLANT FOR GAS WORKS

THE
ELECTRIC CONSTRUCTION
COMPANY, LIMITED

Head Office:
Ingersoll House, 9, Kingsway, London, W.C. 2
WORKS — WOLVERHAMPTON

E.C.C. Electrical Plant is installed in hundreds of Gas Works in the British Isles and abroad.

In many instances the Engineer has preferred to put down his own generating plant, usually choosing direct current produced by E.C.C. gas- or steam-driven generators, with E.C.C. direct-current motors. In others, the supply is taken from an outside source using E.C.C. alternating-current motors for conversion into mechanical power. E.C.C. switch and control gear in both cases.

Let us give you the benefit of E.C.C. experience and of E.C.C. excellence in design and construction.

Peebles
GAS GOVERNORS
are in a class by themselves —at the Top.

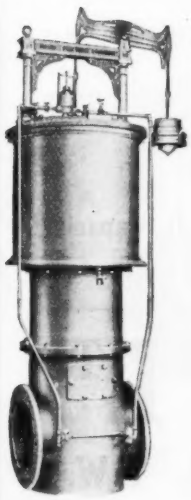


Fig. 29.
Pressure Loading.

Certain products are of such superlative merit as to earn for themselves a universal reputation and whose name is recognised as being synonymous with Quality. In this category are Peebles' Gas Governors.

The entire Gas Industry is unanimous in its opinion of the outstanding efficiency of this equipment.

We invite your enquiries for the following types: Station, District, Retort, High Pressure, Gas Fire, Gas Lamp, and Service Governors.

PEEBLES & CO. LTD.
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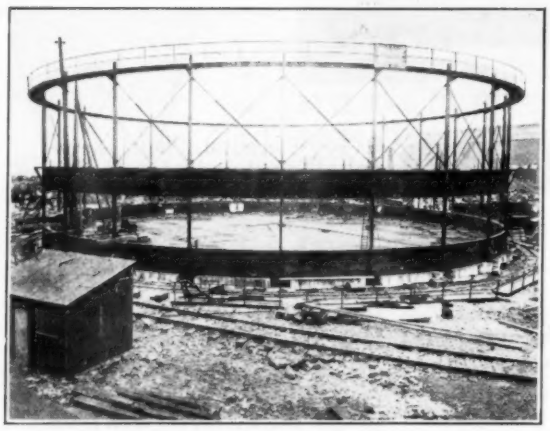
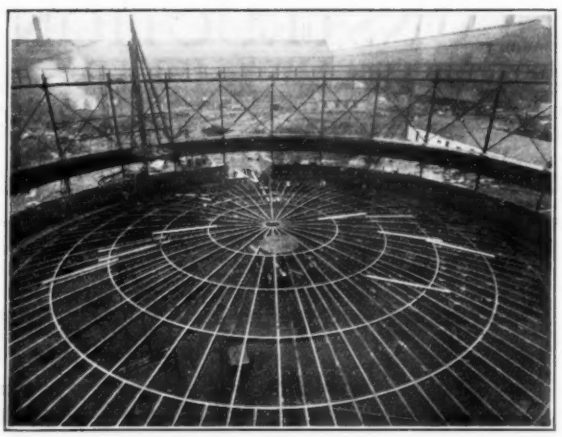
DRY GASHOLDERS
(KLONNE PATENTS)



VIEW SHOWING BOTTOM PLATING AND COMMENCEMENT OF ERECTION OF SIDES OF SHELL PLATES.

VIEW SHOWING ERECTION OF FRAMING FOR FLOATING DISC.



PHOTOGRAPHS SHOWING PROGRESS OF ERECTION OF KLONNE DRY GASHOLDER TWO MILLION CUBIC FEET CAPACITY

AT THE PORT TALBOT WORKS OF THE BRITISH (GUEST, KEEN, BALDWIN) IRON & STEEL COMPANY

CONTRACTORS—THE HORSELEY BRIDGE & ENGINEERING COMPANY, LTD.

Recent orders for Klonne Waterless Holders include one of 6,000,000 c.ft. capacity for the Mine Minister Stein at Dortmund.

DRY GASHOLDERS LTD.

39, VICTORIA STREET, WESTMINSTER, LONDON, S.W.1

LICENSED MANUFACTURERS:—

SAML. CUTLER & SONS, LTD., 39, Victoria St., Westminster, S.W.1.

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ASHMORE, BENSON, PEASE, & CO., LTD., Stockton-on-Tees.

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THE HORSELEY BRIDGE & ENGINEERING CO., LTD., Tipton, Staffs.

THE
"VERITAS"
PATENT
AUTOMATIC AIR-SCREEN
BURNER

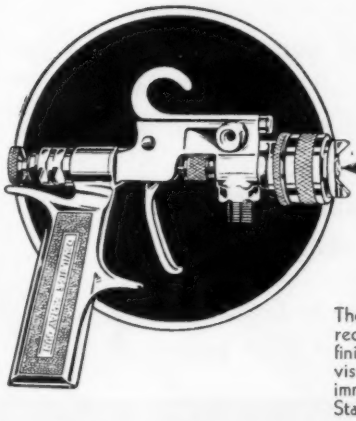
THE GREATEST ADVANCE IN GAS BURNER DESIGN
SINCE THE INTRODUCTION OF INVERTED BURNERS

ONLY ONE ADJUSTMENT

Write for details to—
FALK, STADELMANN & CO., LTD.
83-93 FARRINGDON ROAD, LONDON, E.C.
GLASGOW, MANCHESTER, BIRMINGHAM, DUBLIN,
NEWCASTLE, CARDIFF, LEEDS, LIVERPOOL, SWANSEA
Works:
LONDON, S.W.; BIRMINGHAM; RAINHILL, LIVERPOOL

THE SERVICE BEHIND THE GUNS

Aerograph and DeVilbiss Spray Painting and Finishing Equipment is manufactured under ideal conditions and is backed by a service which is unrivalled for speed and efficiency.



Those interested in modern equipment for reducing finishing costs and improving finishing methods are cordially invited to visit the Aerograph DeVilbiss Factory—immediately adjacent to Lower Sydenham Station on the Southern Railway.

AEROGRAPH · *DeVilbiss*

AEROGRAPH CO., LTD., Lower Sydenham, S.E.26. . City Offices and Showrooms: 43 Holborn Viaduct, E.C.1

CVS—60

SILICEOUS RETORTS

FIRECLAY, SILICA, AND SILICEOUS GOODS FOR EVERY TYPE OF PLANT

A Technical Service Department is maintained to give pre-sales service, and close co-operation with clients' requirements.

Note these points :—

(1) Highest "UNDERLOAD SOFTENING POINT" of any retort made which is classified as "Siliceous," insuring rigidity and retention of shape under all normal working loads.
(2) High thermal conductivity giving increased rate of carbonization.
(3) Low thermal expansion (½ per cent.).
(4) No after contraction.
(5) Great mechanical strength.
(6) Made in any lengths.

We cordially invite Engineers interested to visit us at our works.

GIBBONS (DUDLEY) LTD

Head Office: DIBDALE WORKS, DUDLEY, WORCS. Telephone: Dudley 3141-2-3 (three lines) Telegrams: "Machine Lower-Gornal" Middlesbro': Martins Bank Chambers. Bristol: Chapel Green Lane.

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"There are good profits in selling VALOR OIL, CABINETS & DRUMS!

VALOR OIL CABINETS and Drums look the very thing for their job standing in your shop . . . and they fill a long-felt need. They attract customers by *obvious* efficiency. Show how VALOR CABINETS keep oil (household paraffin, lubricating, etc., etc.) pure and clean, dust-proof and fire-proof . . . show how they keep oil locked, how the quantity of oil held is shown by the measuring rod, how all overflow returns into the well of the cabinet.

Every VALOR CABINET sells another. Your turnover is speedy and our terms are generous. We help you with advertising, showcards, cut-outs, give-away literature and electros.

In 12, 30 and 50 gln. sizes.

In sizes 6 to 50 glns.

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Write for discounts and list 39/V10.

THE VALOR CO., LTD.
Valor Works, Bromford, Erdington, BIRMINGHAM.
LONDON: 120, Victoria St., S.W. 1.
Buy British Goods.

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VALOR
OIL CABINETS and DRUMS

CONFIDENCE!

ROSS ON WYE
MALTON
ANNAN
TADCASTER
REVERTED
FROM ELECTRICITY
TO GAS
FOR STREET LIGHTING

THE COMPLETE EQUIPMENT
WAS MADE AND SUPPLIED BY
MESSRS. FOSTER & PULLEN LTD.
BRADFORD

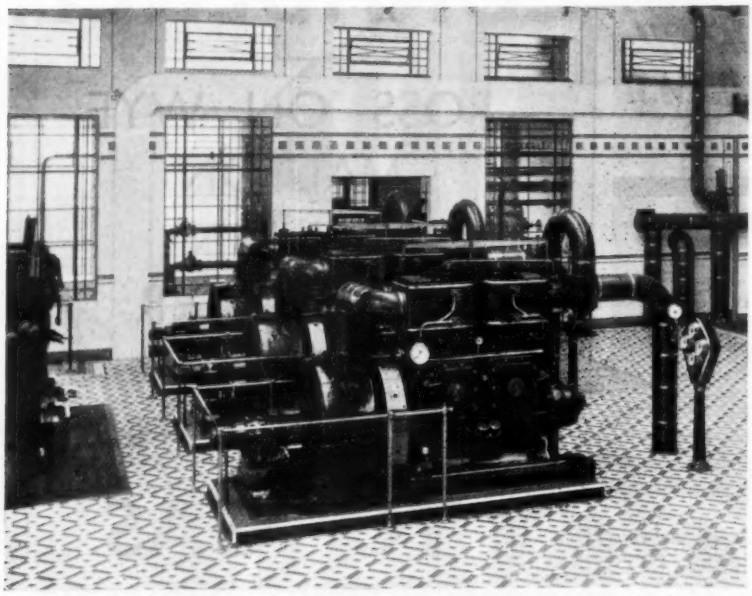
THE NO-TROUBLE BURNER

THE 790 DS. BURNER
is fitted with the
BRAY SILENT REGULATOR
and
the BRAY PATENTED DIFFUSER.
This combination is the most important advance in incandescent burner design for many years:
IT BANISHES NOISE.

THE BRAY 790 DS BURNER.

THE IDEAL BURNER FOR MAINTENANCE WORK

GEO. BRAY & CO. LTD. LEEDS.



Pass out Generating Sets at the Oldham Gas Works. Opened by H.R.H. Prince George, 8th May, 1933.

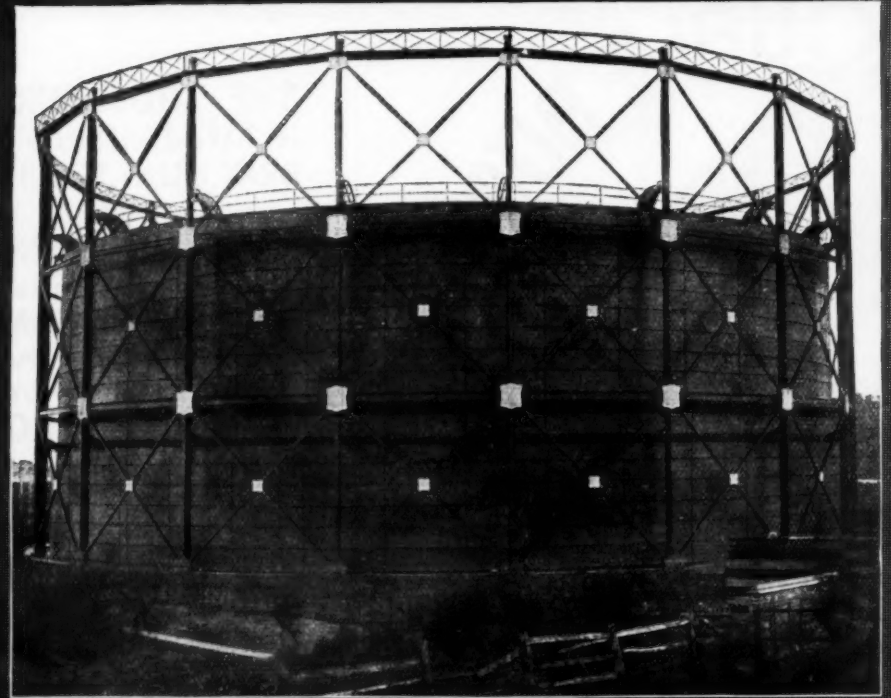
STEAM ENGINES FOR GAS WORKS

The large surplus of steam available in modern gas producing installations makes the use of steam engines for all power requirements the most economical proposition.

We specialise in PASS OUT & BACK PRESSURE ENGINES for the driving of Electric Generators, Fans, Conveyors, Stokers, etc.

ASHWORTH & PARKER
RIVERSIDE WORKS
BURY, LANCS.

Tel. Add. : "Kinetic, Bury" *'Phone :* 620/1



GASHOLDERS AND TANKS OF ANY SIZE AND DESIGN

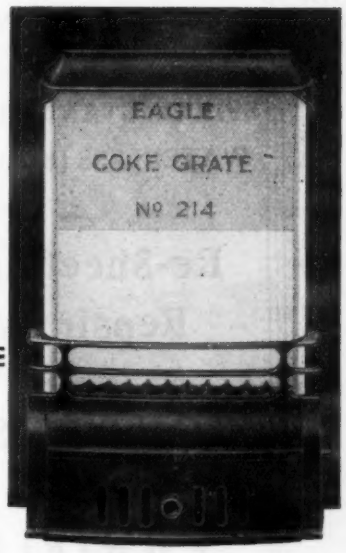
TELEGRAMS "GAS LEEDS" TELEPHONE Nos 20226.

LONDON OFFICE, 5. VICTORIA ST, S.W.1.

PURIFIERS, STRUCTURAL STEELWORK
WELDED AND RIVETTED STEEL PIPES, BOILERS

CLAYTON SON & Co LD., MOOR END HUNSLET, LEEDS

The way to BIGGER COKE SALES



DISPLAY AND SELL MORE "EAGLE" GAS-COKE GRATES

EAGLE GAS-COKE GRATES will yield you substantial business this Winter. Thousands of people only need to know the advantages of these grates over coal fires to have them installed—and up go your sales of household coke.

EAGLE GAS-COKE GRATES make a cosy, glowing, fireside. There is no smoke or soot, consequently there is less dust, less labour, and a decided economy over coal fires. Tell these factors to your consumers - tell them how easy it is to start a glowing fire in a few minutes with the aid of the gas burner and big sales are yours.

There are many attractive designs in the "EAGLE" GAS-COKE GRATE series. These grates can be supplied as complete interiors (as illustrated) or as inset grates. All are fitted with high-efficiency gas burners.

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"One Better than the Coal Fire"

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OF ALL SIZES AND TYPES

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Re-Sheeting and Repair Work

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PRODUCERS FOR GASIFYING COKE BREEZE

(Fitted with the Koller Patent Revolving Grate)

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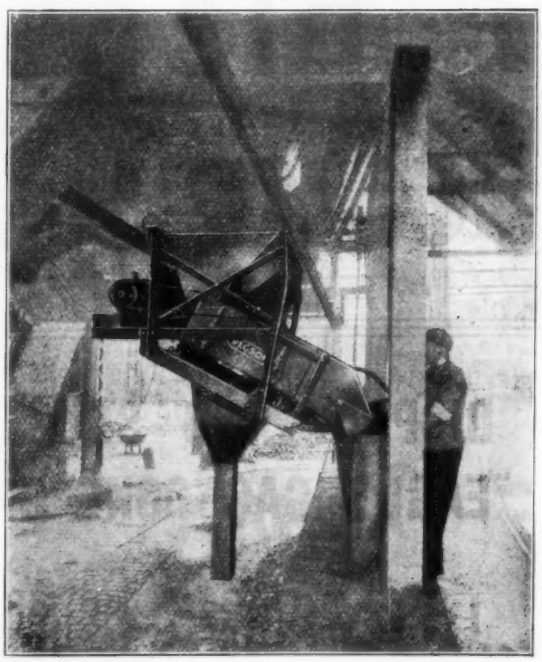
Debreezing Screens



Portable unit consisting of "Live-wire" Debreezing Screen and bagging chute.

OF PROVED EFFICIENCY

The above illustrates only one of five Pegson "Live-wire" Vibrating Screening Units installed at the STRETFORD GASWORKS, MANCHESTER.

Many other Gas Companies are installing Pegson Primary and De-breezing Screens, and the number of repeat orders definitely testify to the satisfaction given by these inexpensive machines.

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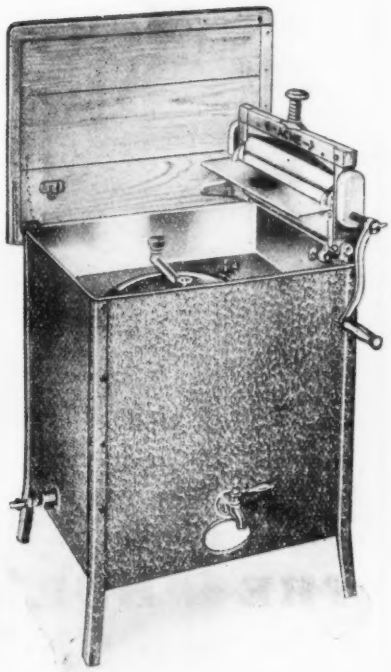
Nothing to Beat them!

ECONOMIC WASHING MACHINE



A combined Gas Boiler, Washer, Table and Wringer. Its robust construction and design ensure maximum work on wash-days. Apart from its utility it is attractive in appearance, being finished in mottled porcelain enamel with chromium plated tap.

This machine is now supplied with the patent tap shown in the No. 18 boiler illustrated below.

Note neat and compact appearance when closed.

ECONOMIC No. 18 Square Mottled GAS BOILER

Entirely new design, fitted with an extra strong copper pan, square cast aluminium top rim with copper condenser fitted in back portion, and a hinged copper lid. The outer casing is also square and is made from sheet steel, porcelain enamelled. **A notable feature is the Economic Patent Full-Bore Tap, which Swivels Absolutely Clear when not in use.** The Boiler is complete with wooden top (which makes a handy small table) but can be supplied without if desired.

Showing Boiler with Wooden Top.

Capacity 10 Gallons

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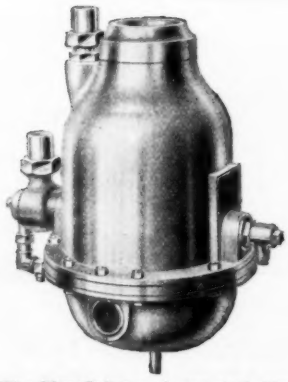
Outstanding "Hurro" Successes for the Coming Season

"Hurro" Mottled Enamelled Gas-Heated Wash Boiler. Made in circular or corner type from 10 to 20 gallons capacity. Also supplied with overflow for connection to bath.



The Circulator can be connected either to a new hot water installation or to an existing installation for use as an alternative in Summer to the coke boiler, which may be preferred in Winter. With such a dual system the kitchen is kept warm in Winter and cool in Summer, and hot water provided economically the whole year round.

The New "Ottawa" Water Heater. A self-contained heating unit and storage cylinder made to hold from 12 to 50 gallons and supply steaming hot water always. Gas consumption automatically controlled as water heat rises or falls. To keep a full cylinder at 140 deg. F. for an hour only 1¼ cub. ft. of gas is used.

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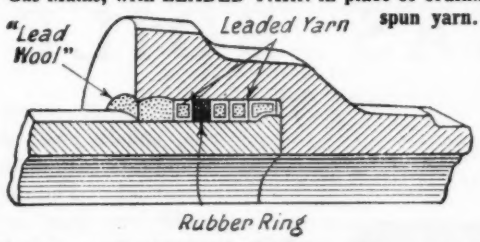
PATENT FLEXIBLE JOINT
for Gas Mains, with LEADED YARN in place of ordinary spun yarn.



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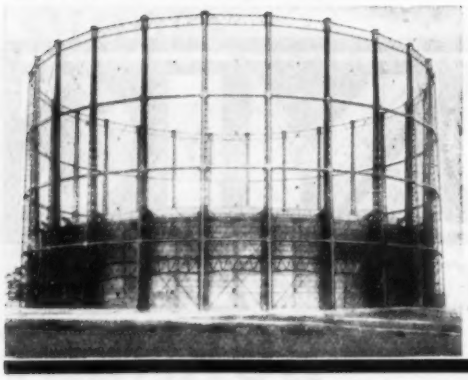

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We have been entrusted with contracts for all types of Holders and Gas Plant for use in all parts of the World.

Your contracts can be placed in our hands with absolute confidence. When specialized knowledge and first hand information are required you will find us ready to help.

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THOMAS PIGGOTT & CO., LTD.
HORSELEY WORKS, TIPTON, STAFFS.
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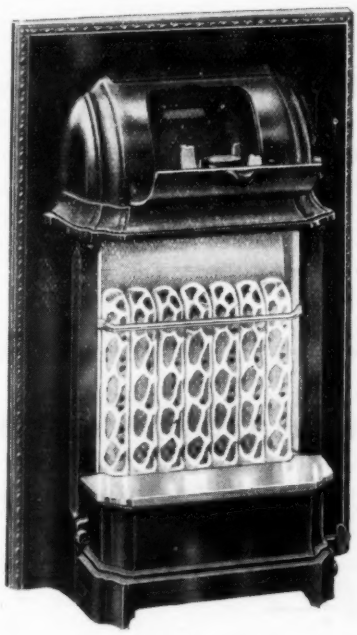
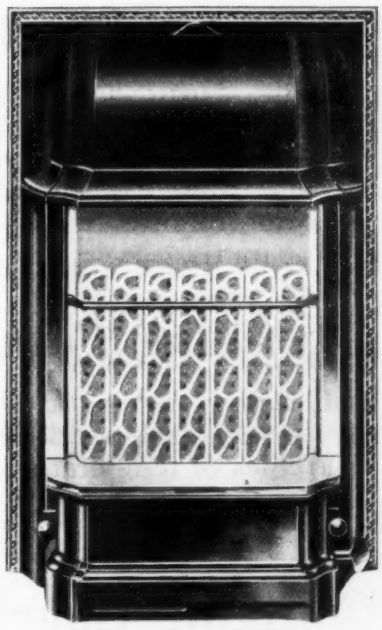
The **'Tyne'** *gas fire*





THE "Tyne" Gas Fire has, in addition to a markedly handsome appearance, the advantage of a highly efficient boiling burner housed in the canopy. When the front of the canopy is lowered the boiling burner is in position for use, whilst in the closed position there is nothing to indicate its existence.

This dual feature of the "Tyne" is a big selling point.

Fitted with Radiation "Beam" (Trade Mark) Radiants and "Injector-Ventilator."

Illustrated Price Lists on application.

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Humphreys & Glasgow Ltd.

Labourless Automatic

Self-Steaming *Self-Charging*
Self-Operating *Self-Clinkering*

Carburetted-Water-Gas Plant

Self-Steaming Plant:—

By making "*waste-heat*" *Boilers* (of which they are now installing their 202nd example) a corporate part of H & G Plant, the Steam is produced without cost. Moreover, *in addition to saving ordinary boiler fuel and labour,* these "waste-heat" Boilers (unlike independently fired boilers) do not require house, setting, or chimney, or fuel and ash handling apparatus.

Self-Operating Plant:—

H & G Safety Automatic Operation eliminates gas-making labour, substitutes mechanical precision for human fallibility, minimises the cyclical extremes of temperature, improves the fuel and oil efficiencies, and increases the capacity of the Plant—*all while ensuring the Safety of the Process.*

Self-Charging Generators:—

Automatic Charging and Distributing of the Fuel, at the correct period in the operating cycle *without interruption of gas-making,* eliminate coking labour, check escape of "fliers," increase capacity, and contribute to conditions of maximum efficiency in generator and carburetter.

Self-Clinkering and Steaming Generators:—

H & G Self-Clinkering and Steaming Generators Completely Eliminate All Clinkering Labour, Tools, Trouble and Expense, while automatically providing Steam for use in the Generator. In co-operation with the Automatic Fuel Charger and Distributor, they maintain conditions of maximum efficiency throughout the fuel-bed, without circulation of cooling water, or waste of heat, water or steam; on the contrary, they conserve for steam production heat formerly lost. They minimise the carbon in the clinker automatically discharged from the Generator. They achieve perfect distribution of the generator air-blast and steam. They do not require periodical repairs to linings. *No fire-tools are needed; the fuel-bed is never disturbed.*

129 Patents Current or Applied for in the United Kingdom alone.

Humglas House, Carlisle Place, London, S.W.1.

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A UNIQUE & AMAZING METHOD OF OVEN CONSTRUCTION WHICH NO OTHER COOKER POSSESSES!

THE GOVERNOR-GENERAL GAS COOKER is the most striking advance in the development of the SINGLE BURNER OVEN.

THE PATENT BOTTOM FLUE by its ingenious method of construction compels the heat to circulate throughout the entire oven, giving a BETTER Heat Distribution before it leaves at the Bottom by means of the PATENTED DOOR FLUE. The Heat then takes its natural course up the flue in the door, along the passage over the dome of the cooker, and finally passing out of the flue outlet in the CORRECT POSITION at the top of the oven.

THE AUTOMATIC OVEN CONTROL ASSURES ECONOMICAL AND EFFICIENT COOKING SERVICE

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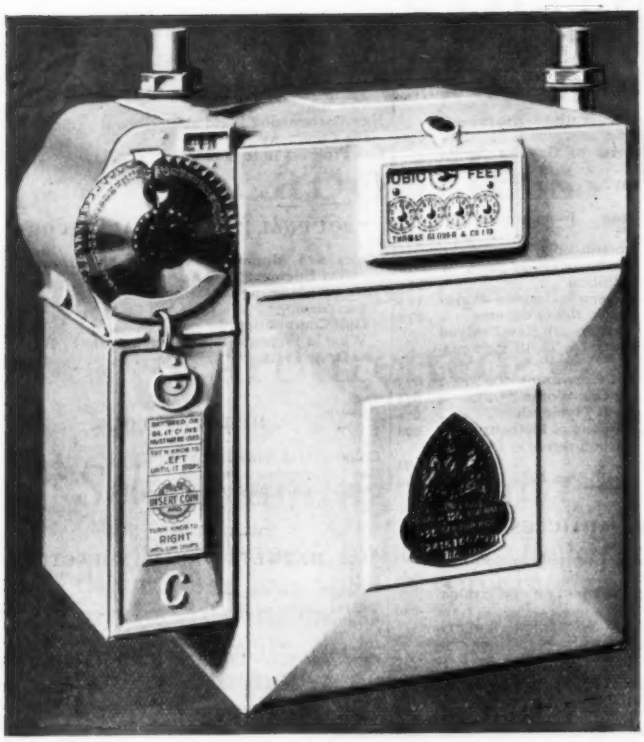

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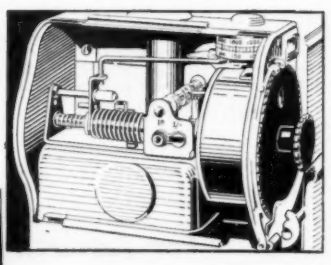

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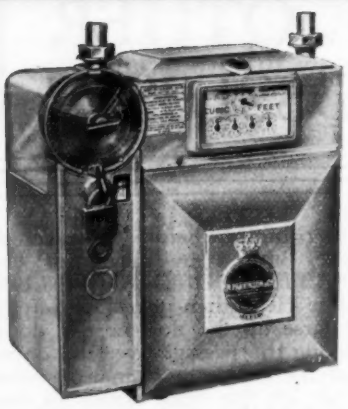

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THE GAS JOURNAL

SEPTEMBER 27, 1933

Vol. 203. 85th Year No. 3671

A Glance at the Contents—

Destruction of Raw Liquor.

Mr. T. H. Prater comments on the success which has attended the system of ammoniacal liquor destruction adopted by the Isle of Thanet Gas Light and Coke Company. [p. 669.]

The Institution Tour.

The Editor commences his story of the Institution's visit to Canada and the United States of America. The voyage on the "Duchess of York" was obviously a most enjoyable one. [p. 675.]

"Get On or Get Out."

This is the keynote of a paper bearing the title "What is Wrong with the Gas Industry?" which Mr. D. A. Pratt read before the Wales and Monmouthshire Association of Gas Engineers and Managers on Thursday last. [p. 682.]

Wales and Monmouthshire Association at Porthcawl.

The Wales and Monmouthshire Association of Gas Engineers and Managers held their Annual Meeting at Porthcawl on Sept. 21, and took the opportunity of attending the inauguration of the new vertical retort installation in that town. [p. 677.]

Yorkshire Industrial Centre Requires Secretary.

Applications are invited for the position of Secretary, at a salary of £250 per annum, to the Yorkshire Industrial Gas Development Centre. [p. 690.]

B.C.G.A. Report.

Published to-day is the twenty-second annual report, which was submitted at the Conference of the B.C.G.A. at Bournemouth yesterday, covering the work done during the past twelve months. [p. 678.]

New Carbonizing Plant at Porthcawl.

It is claimed that the problem of extending and modernizing the gas-works of this popular South Wales resort has been solved in a manner which distinctly enhances the amenities of the town. [p. 680.]

Carburetting Oils.

We give an account of a laboratory investigation, carried out in Germany, on gas oils used for the enrichment of water gas. The object of the investigation was to ascertain whether it is possible to draw conclusions as to the carburetting value of a gas oil from its physical and chemical properties. [p. 676.]

Forthcoming Engagements

Sept. 29.—GAS COMPANIES' PROTECTION ASSOCIATION.—Meeting of the Committee at the Association's Offices at 3 p.m.

Sept. 29.—I.G.E.—Meeting of General Research Committee, 2.30 p.m., 28, Grosvenor Gardens, S.W. 1.

Oct. 5.—MIDLAND JUNIOR ASSOCIATION.—Opening Meeting and Presidential Address of Mr. S. K. Hawthorn.

Oct. 6.—NORTH OF ENGLAND ASSOCIATION.—Autumn Meeting at South Shields.

Oct. 12.—SOUTHERN ASSOCIATION (EASTERN DISTRICT).—Meeting at 28, Grosvenor Gardens, S.W. 1, 2.30 p.m. Subject for discussion: "Coal Blending."

Oct. 12.—SOUTHERN ASSOCIATION (WESTERN DISTRICT).—Commercial meeting, Rougement Hotel, Exeter, 2.30 p.m. (Committee meeting of the District at 2 p.m.).

Oct. 17.—I.G.E.—Meetings of Board of Examiners, 2.30 p.m.; Publications Committee, 3 p.m.; Education Executive Committee, 4 p.m., 28, Grosvenor Gardens, S.W. 1.

Oct. 19.—S.B.G.I.—Meeting of Council in the afternoon.

Oct. 27.—MANCHESTER DISTRICT ASSOCIATION.—General Meeting, Midland Hotel, Manchester, 2.30 p.m.

Oct. 30.—LONDON AND COUNTIES COKE ASSOCIATION.—Meetings of Executive Committee, 11 a.m.; Central Committee, 12 noon; Luncheon, 1 p.m.; Annual General Meeting, 2.30 p.m., Hotel Metropole, S.W. 1.

Nov. 2.—MIDLAND JUNIOR ASSOCIATION.—Paper by Mr. F. L. Atkin on "The Design of Town Gas Fired Furnaces."

Nov. 6.—I.G.E.—Meetings of Finance Sub-Committee, 2 p.m.; Membership Sub-Committee, 2 p.m.; General Purposes Committee, 3 p.m.; Council, 4.15 p.m., 28, Grosvenor Gardens, S.W. 1.

Nov. 7-8.—I.G.E.—Autumn Research Meeting, Institution of Mechanical Engineers.

Nov. 9.—S.B.G.I.—Autumn General Meeting, Hotel Metropole, London.

Nov. 14.—I.G.E.—Session at the Public Works, Roads, and Transport Congress and Exhibition, Royal Agricultural Hall, 11 a.m.; Joint Session of the Institution and the Association of Public Lighting Engineers, 3 p.m.

Nov. 14.—I.G.E.—Meeting of Gas Education Committee, 5 p.m., 28, Grosvenor Gardens, S.W. 1.

1933 "JOURNAL" Directory.

Page 10. BRIDGEND. W. Collin, M., deceased.

Page 20. DEVIZES. S. Hall appointed E., M., and S., vice C. G. Barrett, retired.

Page 32. HEYWOOD. R. Prince, E. and M., resigned.

Page 42. LOUGHBOROUGH. R. Prince appointed E., M., and S., vice E. Onions.

Page 46. MILFORD HAVEN. S. Hall, E. and M., resigned.

Page 56. ROTHWELL. W. Evans appointed E. and M. vice W. B. Palmer, retired.

Page 74. WESTON-SUPER-MARE. T. W. Luckhurst, S., resigned; J. Taylor appointed E. and G.M.

Page 86 and 88. LANARK COUNTY COUNCIL. A. Simmons (Cambuslang) appointed M. at Uddingston vice D. D. Melvin.

Page 92. WEST WEMYSS. W. G. Spence, M., deceased.

Page 107. BOMBAY. A. Dickson, S., retired.

EDITORIAL NOTES

A Good Year's Work

"THE completion of the electrical grid and the urgent need of securing an increase in revenue to offset the heavy capital charges that will have to be met in the future will undoubtedly induce greater efforts to increase the use of electrical energy. It is common knowledge that a largely augmented appropriation for electrical publicity is foreshadowed for the coming year." This quotation from the annual report of the British Commercial Gas Association which was submitted at the conference in Bournemouth yesterday should spur on all gas undertakings to contribute to the National Bodies at the full rate of 7s. 6d. per million c.ft. Competition, already keen enough, will become more intense during the next twelve months. To cope with it, we need unity of purpose throughout the Industry—each individual undertaking really determined to pull its full weight for the good of the whole.

It is a truism that without the B.C.G.A. the Gas Industry would be in a very different position, a very much worse position, than fortunately obtains to-day. The manner in which the Association has co-ordinated and stimulated local publicity is no less remarkable than its original and effective national propaganda; and one of the most gratifying features of the report is that during the year the Association has assisted in more schemes of local advertising than ever before. The more individual undertakings are "up against it," the more they call upon the help of the B.C.G.A. There could be no finer testimony to the strength and the ability of the organization; and there could be no better means of driving home a selling argument than for undertakings to tie-up their own publicity with the National advertising schemes. An example is "Mr. Therm." This happy, ubiquitous little gentleman, whose inception is due to the Gas Light and Coke Company, is now known throughout the country. Then, as an example of the close contact which the Association has developed with the Press, it may be mentioned that no less than 1600 single column inches of editorial comment were accorded in newspapers to the last conference in Leeds—equal to more than 100 pages of a national newspaper.

The year has shown the benefits which have attended the re-organization of the staff of the Association. In the words of the report, "economy of effort and expenditure has been secured while efficiency has been maintained. Centralization has resulted in close, constant, and easy contact with the various sections of the staff, which has thus become a flexible administrative unit. In consequence, the task of co-ordinating the many different activities of the Association has been simplified." All this has entailed a great deal of work on the part of Mr. Walker, the General Secretary, who has shown both originality and resource; and the appreciation of this recorded in the report is well merited.

The recently inaugurated scheme of lectures at schools, universities, Rotary Clubs, and so on has proved a great success; and in this connection by no means the least important feature is that the case for gas has been presented to no fewer than 539 future architects. "Catch 'em young" is a good motto. Turning to the Industry's personnel, we are glad to see the response which has met the Association's Education Scheme for salesmen; and we are glad, too, that a scheme of educational propaganda among the various women's organizations is being considered.

Altogether the report is an excellent record of good work accomplished, and the Association's potentialities of service were never better demonstrated. It remains for each undertaking to make the fullest use of the valuable help at command. We think that this support will become stronger during the next twelve months.

Flights of Fancy?

LAST week details of a scheme for the production of oil from coal were placed before a meeting of the South Wales Industrial Development Council. The scheme, which has been prepared by Prof. G. Knox, Dr. Roy Illingworth, and Mr. H. H. Merrett, provides for the erection of one hydrogenation plant and ten 1000-ton low-temperature carbonization plants along the south-eastern outcrop of the coalfield at an estimated cost of £7,000,000. It is estimated that the hydrogenation plant would produce 100,000 tons of petrol a year from about 365,000 tons of coal and would provide permanent employment for 1000 miners and 1500 process workers. The estimate for the low-temperature carbonization plants is that, treating 3,650,000 tons of coal per annum, they would produce about 240,000 tons of heavy oil, 140,000 tons of light oil, 70,000 tons of pitch, 3220 million c.ft. of surplus gas, and 2,520,000 tons of smokeless fuel. The plants would, it is suggested, find permanent employment for 4000 miners and 1400 process workers.

As for the financial aspect, the cost of coal is taken as £3,011,250, and the value of the products £5,470,000, leaving a balance of £2,463,750 to cover labour costs, water and electricity supplies, rates and taxes, insurance, and amortization and interest on the capital expenditure of £7,000,000. The operating cost of the combined plants is estimated at £1,475,000, leaving a balance of £988,000.

As an alternative, it was suggested that the hydrogenation process might be limited to the oils produced from the low-temperature carbonization plants, together with what could be obtained from gas-works and coke ovens, which would reduce the initial capital expenditure by about £2,000,000, and produce a more profitable yield, as the tar oils, worth £2 10s. a ton, could be converted into petrol worth £15 a ton. Under this scheme a balance of £1,800,000 was estimated on the conversion of 240,000 tons of tar oil into petrol.

It will be gathered that this is no small scheme; also that it is of vital interest to the Gas Industry. It should be regarded keenly by our readers. That the estimates are open to criticism, there is no doubt. Indeed, the Industrial Council realized this at the meeting last week, when it was decided that plenary powers be given to the sub-committee to select as many additional members as it considers desirable, representing all the interests concerned, and that the enlarged committee should report at a future meeting of the Council. Mr. Merrett himself appears to be apprehensive of the outcome of the scheme, which he described as a very speculative one. He thinks it likely that the money required might be used in better ways to the greater advantage of the mining industry. The estimates of cost were criticized by Col. Vaughan Cowell, Chairman of the National Carbonization Company, who put forward that the cost of low-temperature carbonization plants would vary from 12s. to 25s. per ton of coal carbonized per annum, and not from 14s. to 16s. as suggested in the proposed scheme. He added £1,000,000 to the estimate of capital expenditure.

We are all out to help the coal industry. The Gas Industry is one of the best allies of coal, and is likely in the future to become a still more important one. We feel sure of another thing—that the demand for a smokeless fuel for the open firegrate is growing apace; that raw coal will eventually be supplanted by clean fuels, to the benefit of the Nation. But the estimate of an additional 4000 miners employed if the low-temperature carbonization scheme under review were adopted is surely a mistake. The solid smokeless fuel produced would find its market at the expense of raw coal; and from this angle it cannot be hoped that the number of men employed in the mines would materially increase. It would in fact be a brave, or rash, public who decided, on the estimates sub-

mitted by Prof. Knox, Dr. Illingworth, and Mr. Merrett, to invest in the project submitted to the Development Council—a project which lays all too little store on the value of co-operation with the Gas Industry.

A searching criticism of the scheme was made by Mr. John Roberts in the *South Wales Journal of Commerce*, and some of his comments are well worth emphasizing. In the first place, on the question of hydrogenation, he points to the foolishness of planning any scheme without having the co-operation of the interests that control the patent situation. Also, the matter of patent rights and royalties in connection with low-temperature carbonization plants cannot be neglected. Then, in common with Col. Cowell, he has no hesitation in querying the estimate of 14s. to 16s. per ton of coal carbonized for the cost of low-temperature carbonization plant. Mr. Roberts also makes pretty play with the contention that tar oil at £2 10s. per ton would be converted into petrol at £15 per ton. At this price 240,000 tons of petrol would have a value of £3,600,000. Tar oil at £2 10s. would have a value of £600,000; the cost of conversion, at 4d. a gallon, would be £1,200,000. The balance would be £1,800,000. On paper this is pleasant enough. In practice it would mean a conversion efficiency of 100%. Like Mr. Roberts, we were not aware that this is possible. Other details of the estimates leave us with the impression that the scheme does not lack optimism. However, the whole matter is being studied, and the Gas Industry must not lose sight of either its progress or its significance. We would emphasize that any such scheme should seek its success via the Industry, already possessed of the necessary distribution and marketing organization for the gaseous and solid products.

Works Proud

UNFORTUNATELY, but perhaps not undeservedly, the manufacture of gas is associated in the minds of the general public with all that is unæsthetic. The words " Gas-Works " bring to them visions of a hot-potch of excessively ugly buildings, ponderous " gasometers," and acres of dismal yard, whose flatness is only relieved by heaps of coal, coke, and breeze, and dumps of disused piping. That may have been true of many gas-works some years ago, though there were always bright examples of works laid out with a pride in their appearance. On several, however, the impression given above is still no libel, and it is gratifying to be able to record more than one sign of the development in the Industry of a heightened sense of æsthetic values.

To some may occur the question: " What have æsthetic values to do with profits when applied to the actual manufacture of gas? Granted that in selling gas handsome showrooms and well-designed appliances are of importance. But, provided that your works is not an active offence to the neighbourhood in which it is situated, why worry about its appearance?" At first sight that might seem to be an effective snuffer for the flame of æsthetic aspiration. But apparently in the minds of other enlightened and progressive gas engineers, the flame has burned too strongly to be extinguished. In May and June of this year the official inauguration took place of extensive reconstruction schemes at gas-works at Oldham and Lincoln.

At Oldham the Borough Gas Engineer devised a scheme which turned an overburdened and ill-conceived agglomeration of plant into a fine, openly laid out works with everything situated at its most convenient point of utility, well able to cope with immediate demands, and capable of easy extension in the future. Not content with providing his Department with a works fully up to the latest standards of technical efficiency, Mr. Greenhalgh tried to ensure also that his scheme should be what may be described as psychologically efficient. He paid unusual attention to the outward design of his retort house, engine house, boiler house and laboratory, and his concrete storage bunkers; the interior of his engine-room would do credit to any power station; he provided for his employees airy, attractive, and well-fitted messrooms and bathrooms; he paved his yard with well-laid concrete; and finally, he laid out a beautiful shrubbery and flower beds around his gasholders and along the approach to the works. The Higginshaw Works is now a show place, as was discovered by the many guests who attended the inauguration ceremony performed by H.R.H. Prince George.

At Lincoln Mr. Wright has transformed a congested and largely out-of-date works into one with modern and extremely efficient equipment, which has already given strong practical proof of its economic worth. It also is characterized by buildings of good design conveniently grouped round well-laid open yards. The exhauster and booster house is again airy, well lighted, and pleasingly finished within. Mr. Wright, too, has rounded off his scheme with a most attractively planned garden, in which beautiful beds of flowers and flowering shrubs, rockeries, and grass bordered paths are grouped around a fine sunken rose garden. Be it noted that it is entirely home produced, for the terraces and walls, the paving of the sunken garden, and the well-stocked rockeries are built up with the materials from the dismantled horizontal retort beds and concrete foundations; and very pleasing and suitably coloured materials they are. Mr. Wright has found an excellent use for materials which he would otherwise have been compelled to cart away at considerable expense. And the labour of constructing the garden and keeping it in order provides occupation for old employees until they become pensionable.

We have used the term " psychological efficiency " to define the aim of these efforts. By this we do not refer only to the effect on the minds of the general public, who, by the way, have flocked in large numbers to see both these works. That effect is important, but in our view, and, we believe, in the view also of the men in whom the flame burnt steadily, their greatest value lies in the effect on the minds of the employees. An attractive works is likely to be an encouragement to those who work in it to keep it clean and tidy. Works proud employees are as valuable as house proud wives.

"Get On or Get Out"

THIS is the keynote of a paper bearing the title " What is Wrong with the Gas Industry? " which Mr. D. A. Pratt read before the Wales and Monmouthshire Association of Gas Engineers and Managers on Thursday last. It is a spirited contribution—a trumpet call to action. Unbounded enthusiasm and strong faith in the future of gas service must run through the entire personnel of the Industry; this is no time for *laissez faire*. As the author emphasizes, the dice of fashionable appeal is loaded in favour of electricity, though gas, properly harnessed to efficient apparatus, is every bit as capable of fulfilling modern requirements, and has the undoubted advantage of economy. Mr. Pratt asks why the dice should be so loaded. Is it, he suggests, because, even to-day, those responsible for the conduct of some gas undertakings are content to sit down and wait for business to knock at their doors? Is there still in certain quarters a tendency to leave things as they are until competition makes it imperative to effect improvements? Only by continuous, enthusiastic effort to ensure that in every sphere of service gas is used to the best advantage in modern equipment can we stem inroads into our business and exploit the vast potentialities of gaseous fuel. Antiquated gas-using apparatus will not bear comparison with up-to-date electrical equipment; and there is absolutely no excuse for making such a comparison possible.

This matter of modern *versus* modern is one of the vital factors in the progress of the Gas Industry. Street lighting well exemplifies this. Too many comparisons have been allowed of antiquated gas lighting and up-to-date electric lighting. We realize that in many cases the public lighting is out of the control of the suppliers of gas, but even this ought not to prevent determined action to demonstrate to those who have the control exactly what gas can accomplish. This is largely a question of outlook—whether we really believe so much in the virtues of gas for lighting that we have the necessary incentive to adopt fruitful sales methods. To wait for the threat of displacement before making improvements is a policy to be condemned. Act now is Mr. Pratt's advice; gas can stand on its own merits. This has been

amply demonstrated in our columns during recent months. We have recorded, for instance, that the Paddington Borough Council has renewed its contract for gas lighting for a period of fifteen years, and Southwark for ten years, both in face of keen electrical competition.

That such success is not a prerogative of the larger undertakings is also evident from our columns. For 28 years Malton has been lighted by electricity. The Malton Gas Company have now obtained a five years' contract. An even more signal triumph has been obtained at Lymington, where the local electricity undertaking, after being responsible for the street lighting of the town for 32 years, has had to give way to the Lymington Gas and Coke Company, Ltd., the contract being for seven years. Other recent gas successes are Hadleigh, Braintree, Annan, and Ross; while in the "JOURNAL" to-day we record the decision of East Tadcaster to change from electricity to gas—the supply being from the Harrogate Gas Company, seventeen miles away. Tadcaster is unusually interesting. While East Tadcaster will now be lighted by gas, West Tadcaster, on the other side of the river bridge, retains electric lighting. The public will have an opportunity of comparing modern gas with modern electric service.

The Will to Win

WE must work out our own salvation; it is no use complaining of competition. If we have the will to win, we shall succeed. This is Mr. Pratt's belief; and it is ours. There is so much ahead of the Industry, in both the domestic and the industrial fields. New uses for gaseous heat in industrial processes are continually being found; indeed, without an economical supply of heat which can be thermostatically controlled automatically, many of the mass production methods of to-day would be impracticable. Among recent developments Mr. Pratt speaks of bottled gas and the use of gas for propelling motor vehicles. In regard to the former, there are yet many problems to face. The main difficulty is the capital outlay on the bottles. The sum of £30 to cover the bottle and reducing valve is a serious item when the contents of the bottle amount to 350 c.ft. of gas, which itself has to bear compression costs of about 2d. Then there is the question of transport, for such a bottle would weigh about 1 cwt. However, there is good reason to explore the possibilities of a supply of bottled gas to outlying villages.

The use of gas as a substitute for petrol has aroused great interest outside the Gas Industry. In this connection Sir Samuel Instone wrote to *The Times* recently: "The National Government were given practically dictatorial powers to bring about a revival of industry. Let them now use these powers by a bold policy. Were I head of the competent Government Department I would first of all satisfy myself that the Birmingham experiments have succeeded, and after having made adequate arrangements for the distribution of gas, either in cylinders or by charging stations, I would fix an appointed day on and after which all omnibuses, charabancs, and commercial lorries over a certain horse-power would be compelled to use coal gas as their means of propulsion. This would inflict no hardship on anybody, and it would not only save the country millions of pounds per annum on the importation of oil and petrol, but it would bring prosperity to a large number of mines and the steel manufacturers; and while we have the resources in this country, and so many unemployed, it is inconceivable to think that such a source of wealth should be allowed to remain fallow. This is a matter that requires no long-drawn-out conferences, but strong, firm, and immediate action."

As Mr. Pratt says, "the Gas Industry to-day is stronger than ever before, more virile, and able to offer greater service to the community." There is no place for the unenterprising in such an Industry.

PERSONAL

MR. A. DICKSON'S RETIREMENT.

At a Meeting of the Directors of the Bombay Gas Company, Ltd., held at the Offices of the Company, Moorgate Station Chambers, London, E.C. 2, on Sept. 20, 1933, Mr. Alexander Dickson was presented by the Directors with a silver tray suitably inscribed and at the same time the Bombay European and London Staffs presented him with a wireless set.

The Chairman of the Company in making the presentation on behalf of the Board of Directors and the staff said Mr. Dickson had been Secretary of the Company for the past 27 years, and they were anxious to show their appreciation of his services during that period. He (the Chairman) expressed the hope that Mr. Dickson would live many years to enjoy his retirement.

Mr. Dickson in returning thanks for the gifts said these presentations had come as a great surprise to him and that in his retirement he would always cherish the many happy years spent with the Company.

* * *

We understand that Mr. T. W. LUCKHURST has now resigned his office of Secretary to the Weston-super-Mare Gaslight Company. Mr. JAMES TAYLOR has been appointed Engineer and General Manager, and is also acting as Secretary *pro tem.*

* * *

Mr. RAYMOND PRINCE, whose appointment as Engineer and Manager of the Loughborough Corporation Gas Undertaking, has now been confirmed by the Town Council, first became introduced to the Gas Industry as an articled pupil in the Tipton Gas Department. On completion of his indentures he joined the Royal Air Force in which he remained until the conclusion of the war. He then re-joined the Technical Staff at Tipton for a short period prior to being appointed Assistant Gas Engineer to the Heywood (Lancs.) Borough Council. In 1925 he was promoted to the position of Engineer and Manager at Heywood, which office he is now relinquishing in favour of the Loughborough appointment.

* * *

On completing 50 years' service with the Sunderland Gas Company—30 years of which he has been a foreman—Mr. ROBERT SMITH has been presented with a mahogany chiming clock and an armchair, subscribed for by the officials and staff. The Directors of the Company gave Mr. Smith a cheque. Mr. Charles Dru Drury, the Company's Engineer, presided at the presentation, and remarked that it was the sixth occasion on which he had been present at the jubilee of a member of the staff. The presentation was made by Mr. J. H. Curry, the Secretary, while Mr. C. F. Barrow, Distribution Superintendent, also spoke, both paying a tribute to Mr. Smith's loyal service and to the high regard in which he is held by the men.

* * *

At Coats Parish Church, Coatbridge, last week, Mr. ALEXANDER JAMIESON, Manager of the Johnstone municipal gas-works was married to Miss E. A. King, of Coatbridge. The reception held in the Town Hall was attended by many notable public men. To mark the event Johnstone Town Council presented Mr. Jamieson with a coffee percolator while the staff at the gas-works presented him with a barometer.

* * *

Last week a presentation was made to Mr. C. G. BARRETT, upon his retirement from the position of Engineer and Manager to the Devizes Corporation Gas and Water Department, by the employees of the Joint Committee. At a meeting of all the employees Mr. S. H. Sutton, the Chief Clerk, made the presentation, which took the form of a fitted travelling case, suitably engraved. He expressed the staff's regret at Mr. Barrett's resignation and their best

wishes for his happiness. Mr. Barrett, in reply, thanked the men for their kindness, stating that he, too, regretted leaving, and that he would always remember with pleasure the time he had spent in Devizes.

* * *

Mr. S. HALL, Engineer and Manager of the Milford Haven Urban District Council Gas Department, has been appointed Engineer, Manager, and Secretary to the Devizes Corporation Gas and Water Department, in the place of Mr. C. G. Barrett, whose retirement is referred to in the foregoing paragraph.

* * *

Mr. ALEXANDER SIMMONS, Manager of the Cambuslang gas undertaking, has been appointed Manager of the Uddingston gas-works, the chief source of the county of Lanarkshire's supply. He has been at Cambuslang since 1896 and rose through all the grades. He was appointed Assistant Manager in 1919 and Manager in 1929.

* * *

Mr. W. EVANS, of Sedgeley (Staffs), has been appointed Gas Engineer and Manager to the Rothwell (Northants) Urban District Council in succession to Mr. W. B. PALMER, who has retired. There were 68 applicants for the post, including one from Italy and another from as far distant as Hong Kong.

* * *

Mr. JOHN F. JACKSON, of Stafford, has been appointed to succeed Mr. R. H. STUDHOLME, M.A., as Solicitor to the Mid-Southern Utility Company. Mr. Studholme's resignation is a matter of great regret to the Directors.

OBITUARY

MR. W. COLLIN.

On the day he was to have received the highest honour which the members of his own profession in Wales and Monmouthshire could have conferred upon him, Mr. W. Collin, Manager of the Bridgend Gas-Works, President-Elect of the Wales and Monmouthshire Association of Gas Engineers and Managers, died at Bridgend Hospital.

He was to have been installed as President of the Association at the autumn assembly of the Association at Porthcawl on Sept. 21, but it was stated by the retiring President, Mr. Ivor G. Jenkins, of Abertillery, that Mr. Collin had been taken ill ten days ago and had been removed to Bridgend Hospital, where he was to have undergone an operation that day. There were many expressions of regret at his absence and the installation ceremony was deferred pending his recovery. It was also decided to convey a message of sympathy to Mr. Morgan Morgan, the Secretary of his Company, and to the Directors.

A few hours later—after the members had dispersed—Mr. Collin died at the Bridgend Hospital just before he was to have undergone an operation to his leg.

Mr. Collin had been Manager of the Bridgend Gas-Works for the past eight years. Previously he had been Manager at Coquimbo, Chile, and had also acted in a similar capacity for many years at Porthcawl. Aged 58, he was a widower, his wife having died two years ago, and he is survived by three sons.

He was a member of the Ogmore Lodge of Freemasons, Vice-President of the Bridgend Rugby Club, and a member of the Bridgend and Coity Golf Club.

The funeral took place on Sept. 24 at Bridgend Cemetery, the Gas Industry being represented by Messrs. Ifor G. Jenkins, President of the Wales and Monmouthshire Association; S. Murrey (Aberkenfig); A. Escott (Llantrisant); D. Muir (Pontypridd); R. G. Shdabolt (Birmingham); I. B. Hughes (Pentre); and Octavius Thomas (Rhondda).

Representing the Bridgend Gas Company were Col. A. P. James (Chairman), Mr. John Llewellyn Morgan, Capt. Illtyd Stockwood, Mr. H. J. Randall, Mr. John Evans, and Mr. Morgan Morgan (Secretary).

MR. ROBERT RICHMOND.

Leighton Buzzard has lost by the death of Mr. Robert Richmond, which took place on Sept. 13, an outstanding personality who has been associated with public work both in town and county for over fifty years. Mr. Richmond was in his eighty-second year, and for the past three years he had been compelled, by diminished health and strength, to give up many of his interests. He was a son of Mr. Robert Richmond, a chemist, and in his early days he qualified as a pharmaceutical chemist. His interests, however, were far wider than the bounds of any one profession. He had natural gifts as an engineer which found an outlet as Chairman of the Directors of the Leighton Buzzard Gas Company. He made gas engineering one of his special interests, and in association with the late Mr. C. F. Ruggles, for many years Manager at the Leighton Buzzard Gas-Works, he helped to make the name of Leighton Buzzard notable among model gas-works of their size.

Mr. Richmond was Chairman of the Leighton Buzzard Gas Company for thirty years, right up to the time of his death, and a Director for over fifty years, and it would be difficult to say how much the Company's sound position to-day is due to his influence.

* * *

The death took place last Friday at West Wemyss of Mr. WILLIAM C. SPENCE, Manager of the Wemyss Coal Company's gas-works at West Wemyss, a position he had held for the past twenty years. He was seventy years of age.

* * *

The death is announced of Mr. THOMAS CROSTON, J.P., aged 71, of Church Street, Adlington (Lancs.), Chairman of the Adlington Gas Company, with which he had been associated over forty years. He had been a magistrate twelve years and overseer 26 years. For nearly forty years he was a member of Adlington Council, being Chairman from 1909 to 1910.

CORRESPONDENCE

Liquor Disposal.

SIR,—The recent paper on "Trade Wastes from Gas-Works" read before the North British Association of Gas Managers ("GAS JOURNAL" for Sept. 20) emphasizes the advantages of using a concentrated liquor plant for the treatment of gas liquor from the aspect of improved effluent rather than financial gain. The paper calls attention once again to the difficulties that occur when destroying the liquor by evaporation, and to the need for a regular outflow of effluent at the minimum possible rate. The Summary to the paper refers to liquor destruction as "causing atmospheric pollution and being frequently only palliative."

As long as liquor is looked upon as an unavoidable evil rather than a source of profit, so must methods of destruction continue to receive prominence.

A method of liquor treatment applicable to all works having vertical retorts as part of their gas-producing plant was described by the writer at the Institution of Gas Engineers Autumn Research Meeting in 1931 ("GAS JOURNAL," Vol. 196, p. 411). This method does not cause atmospheric pollution. Absence of recent comment on this process might lead one to suppose that difficulties in working had arisen which had necessitated its discontinuance.

Actually the process has been in use for more than three years, and close examination of the ironwork and brickwork of the retorts reveals no sign of action; there is also no estimable increase in the H_2S or ammonia content of the crude gas. The effluent is precisely similar to that obtained from a concentrated liquor plant, but has the important added advantage that its rate of flow is the minimum possible, as the liquor passes through the still only at the rate of production.

Yours, &c.,

T. H. PRATER.

Gas-Works, Margate,
Sept. 25, 1933.

THE NEWS OF THE WEEK

An Exhibition and Demonstration of modern gas appliances is being held by Redcar Corporation in the Pier Pavilion and was opened by the Mayoress.

The Ceremony of Inaugurating Darwen's new gas plant will be performed on Oct. 25 by Sir Herbert Samuel, M.P. for the Division, and late Home Secretary.

New Showrooms and Offices are about to be erected by the Exeter Gaslight and Coke Company at 11-13, East Southernhay, Exeter. The plans have been prepared by Mr. S. Dobell, architect, of Exeter, and Messrs. Whinney, Son, and Mr. Austen Hall, FF.R.I.B.A., of London.

Following their Recent Success at the Sutton Carnival, the Wandsworth and District Gas Company won First Prize at the Epsom and Ewell Carnival—a Silver Cup for the best descriptive tableau entered in the Trades Class, which included multiple firms, held on Wednesday last.

A Dividend Has Been Declared by the Directors of Messrs. Parkinson & Cowan, Ltd., on the 7% cumulative preference shares in respect of the six months ended March 31, 1933. This is payable on Sept. 30, and the Transfer Books of the Company are closed between Sept. 23 and this date.

Institute of Fuel.—On Wednesday, Oct. 18, Dr. Ing. H. Koppers will present a paper entitled "Recent Developments in Coking Practice." The meeting will be held at the Geological Society's Rooms, Burlington House, Piccadilly, London, W. 1, at 2.30 p.m.; and the chair will be taken by Dr. F. S. Sinnatt, Director of Fuel Research.

The Net Profits of the Australian Gas Light Company for the past year, including the balance brought forward (£25,077), amount to £309,525, less dividend at the rate of 3% paid on Feb. 24, 1933, £123,300, leaving a balance at the credit of the profit and loss account of £186,225. The Directors now recommend the payment of a dividend for the past half-year at the rate of 3% on the "A" and "B" shares, which will absorb £123,300, leaving a balance to be carried forward of £62,925.

A North Wales Scheme is under consideration by representatives of the North Wales Coal Owners' Association and the East Denbighshire Industrial Organization to establish a £32,000 plant for the low-temperature carbonization of North Wales coal, states *The Times*. This coal has been declared eminently satisfactory for the purpose by the Fuel Research Board, and a scheme is now being prepared by a special technical sub-committee of the Industrial Organization, with Dr. Haydn Williams at the head.

Having Received Notification that the Bradford Corporation have accepted the Council's offer of £22,500 to purchase the Wilsden Gas-Works, the Bingley Urban District Council are making application to the Ministry of Health for borrowing powers and authority to make the purchase; and if necessary will subsequently apply to the Board of Trade for a special order authorizing the Bingley Council to supply in the Wilsden area. Wilsden, which a good many years ago was merged with Bingley for local administrative purposes, has hitherto been in the Bradford Corporation gas supply area.

The Satisfactory State of the Gas Undertaking has enabled the Skipton Urban District Council to approve a recommendation of the Gas Committee that the charge for gas for all purposes be reduced as from Oct. 1. The old scale of charges had been replaced by a block system providing a flat rate and a decrease of price as consumption increases. For the Skipton and immediate district the new charge is 3s. 11d. per 1000 c.ft. for the first 5000 c.ft. consumed, and progressive decreases to 3s. 6d. per 1000 c.ft. in excess of 15,000. Charges for out-district consumers are slightly higher, according to distance, Gargrave being the highest at 5s. 5d. per thousand for the first 5000 and 5s. in excess of 15,000. Rebates are increased proportionately for users through prepayment meters in all areas. A new charge for gas used in heating greenhouses is a fixed £1 per quarter *plus* 4·8d. per therm.

Scientific Utilization of Coal.—Mr. Frank Hodges, formerly Secretary of the Miners' Federation, in an address at the Sir John Cass Technical Institute, Bishopsgate, London, last week, said that foreign oil was the real enemy of coal and must be attacked over the next decade with the utmost technical and scientific vigour. Electricity and gas would continue their inevitable march, but coal was their fundamental raw material. He would urge a mass research attack upon the whole problem of scientific coal utilization, as this was a surer road to travel than the apparently unfruitful way of re-establishing British coal in markets which were being increasingly supplied with coal from countries of destination, or which were subject to a system of international quotas by restrictive international agreements.

Eastern Counties Association.

The Autumn Meeting of the Eastern Counties Gas Managers' Association will be held in the Board Room of the National Gas Council, 28, Grosvenor Gardens, on Thursday, Oct. 19, when the chair will be taken by the President, Mr. W. Grogono, of Croydon.

A paper is to be read by Mr. R. J. Milbourne entitled "The Upkeep of Gasholders."

British Commercial Gas Association.

Scottish District Conference at Dunfermline.

The Scottish District Conference of the British Commercial Gas Association is to be held in the City Council Chambers, Dunfermline, on Wednesday, Oct. 4.

At 11.45 the morning session opens with a reception and address of welcome by Provost Gorrie, to whom a vote of thanks will be proposed by Mr. J. W. Napier, of Alloa. An address will also be given by Sir Francis Goodenough before adjournment for luncheon at the Royal Hotel.

Sir Francis Goodenough will preside at the resumption after luncheon, when papers will be read by Mr. J. W. McLusky, of Glasgow, on "The Development of the Industrial Field;" and by Mr. R. D. Keillor, of Greenock, on "Town Gas and Industrial Re-Vitalization." These papers will be followed by a discussion.

New Coke Ovens at Wath-on-Dearne.

A Yorkshire Enterprise.

At the Manvers Main Collieries at Wath-on-Dearne, near Barnsley, a battery of bye-product coking ovens costing about £250,000 and embodying many new features was brought into action last week. The erection of these 30 ovens, the first part of a scheme that includes 45 altogether, is the first step in the complete modernization of this old-established undertaking.

A coke oven plant has been working at the Manvers Main Collieries since 1906. Last year the Board decided to scrap the old plant and erect a modern installation on the same site. When the 45 ovens are complete over 1000 tons of washed slack will be dealt with daily. The present portion, consisting of 30 ovens, will have a rated capacity of 500 tons of coal a day. It will be used for producing coke for domestic and central heating purposes.

It enters this field with what was acclaimed at the opening ceremony as the most modern plant of its kind in the world, and as the best possible equipment for supplying a clean, smokeless, and low-ash fuel for either open grate or central heating installations. The firm has placed its contract for this important scheme with Simon-Carves, Ltd., of Cheadle Heath, Manchester. Another colliery undertaking has placed a similar contract with the same firm.

The "underjet" ovens are of twin-flue type with coal and coke handling equipment, coke screening plant, and bye-product plant, including gas condensers, an electrical de-tarrer, three ammonia and three benzole scrubbers, and

a complete crude and rectified benzole plant eliminating primary distillation and capable of producing 10,000 gallons of motor spirit from two stills. A special feature of the ovens is the Wolff patent self-sealing doors, which supersede the method of clay-luting, and prevent the waste of heat and gas. A striking external feature of the installation is the reinforced concrete tower, 140 ft. high, for the coal service bunker. An important bye-product will be 3,000,000 to 4,000,000 c.ft. a day of surplus gas.

Mrs. Murray-Philipson, wife of Mr. H. R. Murray-Philipson, M.P., one of the Directors, turned on the gas with which the ovens were lit, and the actual lighting was done by Mrs. O. J. Philipson, wife of the Managing Director.

East Tadcaster Reverts to Gas for Street Lighting.

Half a century ago the streets of East Tadcaster were lit by gas, but there were then only five gas-lamps, and one of these was lit at his own expense by the late Mr. John Smith, and another by the late Dr. T. B. Ireland. Then came the Tadcaster Electric Light Company, and along with West Tadcaster, from which it is separated only by the river bridge, East Tadcaster decided upon electric lighting for street purposes, and had a supply from fifteen or sixteen standards. Now the Parish Council have again reverted to gas, on the ground that it gives a better light, and is cheaper, and 28 lights have been installed by the Harrogate Gas Company.

The Gas Company point out that modern traffic conditions demand that public lighting should be good and well diffused, and with the higher speed of vehicles, it is essential that the lighting should be graduated so that there is a reduction of illuminating power from the centre of a town to the outskirts. A sudden change from lights to the darkness of an unlit road is a source of danger to fast traffic and pedestrians crossing the road. Therefore the new scheme has been designed to reduce such dangers to the minimum, the higher power lights with four incandescent mantles in each lamp being erected on the main road between Tadcaster Bridge and the corner of Wighill Lane, and from this point for a distance there are three mantles in each lamp, and finally two mantles per lamp on the outskirts of the town. In the side streets there are also two mantles in each lamp.

Every lamp is provided with clockwork controllers, which light and extinguish the lamps automatically every night, and again in the early hours of the winter mornings for the benefit of people going to work. The new lamps are fitted with special stainless steel reflectors, which considerably increase the illumination along the line of the road. The Company send gas to the Tadcaster district under high pressure from their Harrogate Works, a distance of seventeen miles.

Inauguration.

The Chairman of the Parish Council (Mr. J. Shilleto) inaugurated the scheme by turning on the first light. He was introduced by Mr. F. Barber, Chairman of the Company, and briefly returned thanks for the honour conferred on him, after which a tour of inspection of the whole of the lamps was made by the members of the Parish Council, with Mr. Barber, Mr. J. W. Knowles (Vice-Chairman of the Company), other officials, and a few interested persons.

At the close of the inspection those present were entertained by the Company at tea at the Britannia Inn, where Mr. Barber, who presided, said the Directors of the Harrogate Gas Company thought that the inauguration of the public lighting of the streets of East Tadcaster by gas was worthy of some little ceremony, and a fitting opportunity for making friendly contact between the members of their Council and some of the responsible heads of the Company.

When the lighting authorities were also the owners of the electricity undertaking, the Chairman continued, all competition for public lighting by gas was generally debarred, regardless of all questions of efficiency, reliability, and cost. Where such authorities were also the owners of the gas undertaking, they found that it still retained its supremacy in public lighting. Almost without exception in all cases where the lighting authority was strictly impartial, and after complete test of public lighting by both gas and electricity, gas had been adopted. What were the merits required in public lighting? First, reliability. Secondly, that the light should be free from dazzle, and be well and evenly diffused. And thirdly and lastly, the cost should be the lowest obtainable with efficiency. Gas was unquestionably the cheapest service for the purpose, and by the Company providing the pillars and lamps they had been spared raising the necessary capital to provide them, though the price charged for the service included the interest on them.

As Chairman of the Harrogate Gas Company, he trusted they would accept that modest hospitality as evidence of the Company's interest in its consumers, and he hoped that the Council of East Tadcaster would have no regrets or disappointments in the service which the Company had contracted to give. He asked his colleagues, Mr. J. W. Knowles, Mr. F. H. Robinson (Engineer and Manager), Mr. H. Wadsworth (Distribution Superintendent), and other members of the Company's staff present, to drink to the health, happiness, and prosperity of the Chairman and members of the East Tadcaster Parish Council and the parish which they governed.

Mr. Shilleto briefly responded, and general satisfaction was expressed at the efficiency of the new lighting, as seen that evening.

In addition to the lighting scheme at East Tadcaster, the Harrogate Gas Company have also secured, and just put into action, a smaller lighting scheme for the Parish Council of Thorp Arch. It is on similar lines to the East Tadcaster scheme, but in this case there was no street lighting previously.

Are Gas Fires Popular?

Two sweeps at Bournemouth ask the British Commercial Gas Association whether the use of gas fires will ruin their trade. Yesterday afternoon a deputation of chimney sweeps arrived at the Conference to ask that gas undertakings should give special consideration to the employment of their sons, who had no living to look forward to from chimney sweeping owing to the increase of gas fires. Sir Francis Goodenough saw them and gave the deputation a sympathetic reply.

Salesmanship.

In his Presidential Address at the 23rd Annual Meeting of the Incorporated Sales Managers' Association, held in London last Thursday, Sir Francis Goodenough said that, looking back over the past seven years of active work of the Association, he thought they could truthfully summarize the progress by saying that they had put Salesmanship into the current vocabulary of the nation. To-day, few people needed to be told that Salesmanship, in the true sense of the word, was a fundamental requirement of every business, calling for the employment in its study, planning and application of the best brains obtainable, and had for its aim true service to the buyer.

THE NEWS—continued.

Demonstration Room Inaugurated at Plymouth.

The recently completed permanent demonstration room at the George Street showrooms of the Plymouth and Stonehouse Gas Company was used for the first time on Tuesday, Sept. 12, when the Chairman of the Company, Col. R. L. Norrington, opened the first of a series of cookery demonstrations which are to be held there weekly. He mentioned that the objects of the demonstrations were that customers should obtain the best possible results from their gas cookers, and said they were always ready to send a representative to a customer's home if any difficulty was being experienced with the cooker.

The demonstrator was Miss K. Jenkin, who used a "New World" oven to cook a lunch comprising roast beef, Yorkshire pudding, roast potatoes, baked tomatoes, and apricot charlotte, each of which was put into the oven at the same time and taken out at the end of an hour, the temperature of the cooker having been set by means of the "Regulo" oven heat controller. Miss Jenkin also baked in a "Vulcan" cooker a Swiss roll, sultana scones, and ginger buns.

The demonstrations were largely attended.

Presentation to Weymouth Employees.

On the evening of Sept. 14 the whole of the staff and employees of the Weymouth Consumers' Gas Company met at the gas-works to witness the presentation of a souvenir of the opening of the new works to employees with long service.

The presentation took the form of a mounted and framed photograph of employees with 40 years' service and more being presented to Sir Francis Goodenough and the Mayor of Weymouth on the occasion of the recent opening ceremony.

The presentations were made by Mr. M. C. Frowde, J.P., Chairman of the Gas Company, who was supported by members of the Board, the latter being represented by Messrs. J. R. George, C. H. Bown, and H. Lambert.

Mr. Frowde, in making the presentation, spoke of the excellent works which had been opened in July, and said that the plant was giving every satisfaction, and the men were working under conditions far superior to those of a few years ago. He thought these better conditions were reflected in the happy spirit that existed between the employees, the management, and the Board.

Mr. Frowde stated that a number of old employees with over 40 years' service reflected great credit on the men and also honour to the Company, and he hoped that the photographs would be some reminder of the many years they had served the Company. He assured them that every member of the Board wished them many years' happiness in their retirement.

The Recipients.

The employees presented with the photographs were:—Mr. J. Roper, 47 years' service; Mr. W. Simmonds, 40 years; Mr. R. Randall, 40 years; Mr. J. Towells, 40 years; Mr. W. Crocker, 41 years; Mr. C. Bolt, 40 years; Mr. C. Churchill, 42 years; and Mr. W. Damer, 48 years.

Mr. J. R. George, Vice-Chairman of the Company, said Mr. Frowde was always out to do everything he possibly could for the welfare of the employees, and he could assure them that he had the whole-hearted support of every member of the Board. It was a great pleasure for them to be present that evening.

Mr. J. T. Joyce, Engineer and Manager, on behalf of the staff and the employees, proposed a hearty vote of thanks to the Chairman and Directors for their presence and also for their generosity in giving the souvenirs and attending the works to present them to the old employees. He assured the Directors that the employees were a happy family, and that all, from the youngest boy upwards, were out to do their best for the Company.

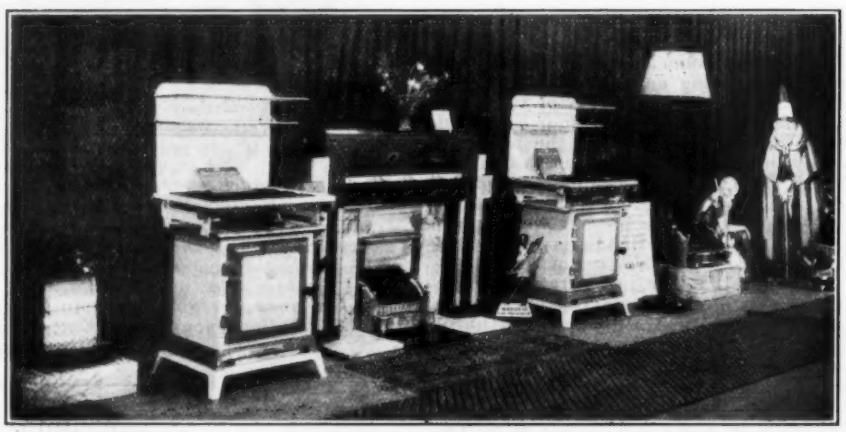
Mr. Simmonds also expressed on behalf of the old employees thanks to the Directors in presenting them with the souvenirs and called for cheers, which were heartily given.

Cheaper Gas for Large-Scale Users.

The Gas Light and Coke Company announce a reduction in their charges to consumers who use gas on a large scale. This reduction comes into force with the September quarterly accounts, and will affect manufacturers, caterers, and general bulk consumers.

The reduction in gas wholesale charges takes the form of the introduction of block rates, by which the price falls as the consumption increases. The Company state that they have reason to believe that the new rates policy will prove an added stimulus to the use of gas by industries in and around London which require heat in their technical processes. The recent growth of new factories in the London area has had considerable effect on the consumption of gas. There are to-day more than 2000 factories served by the Gas Light and Coke Company which use gas on an average for seven heat processes in each factory.

A Middlesbrough Exhibition



A well-attended Exhibition of Gas Appliances was held recently in the Town Hall Crypt, Middlesbrough, under the auspices of the Corporation working in conjunction with Messrs. R. & A. Main, Ltd. As can be seen from the illustration, the possibilities of gas as a household fuel were effectively exploited by a display of the most modern appliances. There was a large attendance on the opening day of the exhibition, and Alderman S. A. Sadler, Chairman of the Gas and Electricity Committee, who presided, pointed out in the course of his remarks that the gas supply in Middlesbrough is one of the best and cheapest in the country. A special feature of the exhibition was a comprehensive display of the latest enamelled cookers. Visitors interested in gas fires were well catered for by the appliances on view, which included a wide range of designs in finishes to harmonize with the decorative scheme of any room; and last but not least, a range of water heaters was displayed covering every requirement in the provision of hot water for the home. During the run of the exhibition Cookery Demonstrations and Lectures were given twice daily by Miss M. K. Gompertz, M.C.A., of R. & A. Main, Ltd.

Dramatized Cookery Demonstrations.

Parkin on Stove Company's Novel Scheme.

A novel type of cookery demonstration has recently been inaugurated by the Parkinson Stove Company, and those which were held during last week at Bournemouth proved very successful in attracting large and appreciative audiences.

Briefly, the demonstrations take the form of simple plays concerning home life built round lectures dealing with various phases of cookery. The plays are mainly humorous, and the teaching points, being in picturesque guise, are driven home with great force, while the advertising matter, being subtle, is swallowed unconsciously but with good effect. As clever artistes have been engaged, the entertainment level is high, but does not obscure the advertising value. It is suggested that eight performances be given in one week—six evening performances and two matinees.

The staging is planned to be the simplest. For each play a model kitchen is the setting—a drop curtain in front is needed, so that historical *tableaux vivants* may precede and illustrate each play. The plays are sponsored by the Parkinson Stove Company and are the property of Miss Gwen L. Hughes; the copyright may not be infringed in any way.

The programme, as it stands at the moment, consists of six playlets, each covering a different branch of cookery. It is proposed to change the programme each night to cover as wide a ground of cooking and household subjects as possible in the one week.

THE PROGRAMME.

The entertainment, which covers two hours, but can be extended to 2½ hours, is as follows:

Playlet No. 1.—" Let's Have a Party "—which embodies dainty dishes.

Playlet No. 2.—" Stone Ages "—which embodies the cooking of game and poultry and complete meals.

Playlet No. 3.—" Nurse Comes to the Rescue "—which embodies invalid dishes.

Playlet No. 4.—" Setting a Sprat "—which embodies a complete meal with dinner service, &c.

Playlet No. 5.—" An Unexpected Visitor "—which embodies quickly prepared dishes.

Playlet No. 6.—" Housekeeping in Hard-Up Days "—which embodies economical cooking, together with cooking by use of steamer.

The Parkinson Stove Company claim to be the first gas appliance manufacturers to sponsor this novel type of cookery demonstration in this country, and apart from the narrower advertising viewpoint, the scheme is bound to impress upon the public still further the value of gas service to the community. The Bournemouth Gas and Water Company, in conjunction with whom the first series of these demonstrations was held, are also to be congratulated in showing their enterprise by being the first gas undertaking in the country to arrange for this unique presentation.

During the present week, the demonstrations are being held in conjunction with the Southampton Gas Light and Coke Company, at the Coliseum, Southampton, and it is the Parkinson Stove Company's intention to continue them in other parts of the country up to Christmas.

Electricity Unfairly Favoured in New Zealand.

Gas Manager Protests to Tariff Commission.

Equality of treatment for the gas and electricity industries was sought recently by Mr. James Lowe, Manager of the Auckland (N.Z.) Gas Company, before the Tariff Commission.

He said the specific duties to which his Company objected were those of 25% on gas ranges, &c., 10% on gas engines, and 20% on cast-iron pipes. He asked that these items be treated in the same manner as similar electric appliances. The duty on electric ranges was 20%. Electrical motors were free, and he asked that the duty on gas engines be abolished. He also urged a duty of at least 2d. per gallon be imposed on crude oil importations, which he said were affecting coal, coke, and gas. The Industry was being squeezed between State-aided electricity on the one hand, and free imports of crude oil on the other.

Prof. Murphy commented that the three major gas companies were showing quite good profits.

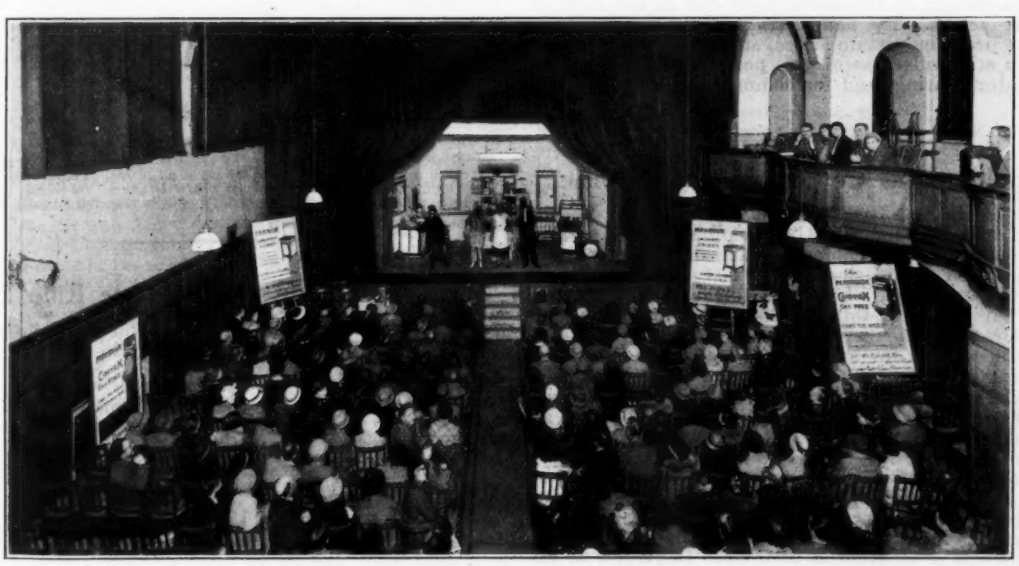
Witness replied that was due to good management. Their rate of expansion was being slowed down. In reply to Dr. Craig, witness said there was not much danger of the Gas Industry being held up by strikes.

Banbury's Centenary Celebrations.

The Banbury Town Hall was crowded on the evening of Friday, Sept. 15, when the prizes for the various competitions organized by the Banbury Gas Light and Coke Company in connection with the centenary celebrations were presented by the Mayoress. During the five days of the exhibition, when cookery demonstrations on the different specimens of cookers, and lectures were given by Miss E. D. Crossland, Diplomée N.C.T.S., and washing demonstrations by Miss D. Hooper, the attendance numbered 1600. The cake baking competition open to consumers of the Gas Company attracted no fewer than 129 entries.

The Mayoress said it had given her great pleasure to be present, and she felt sure they had all appreciated what the Gas Company had done for the town in arranging the cookery demonstrations. She would urge them, now that Christmas was drawing near, instead of buying the usual family gifts to consider the purchase of such useful and labour saving devices as the appliances they had seen exhibited.

Mr. W. R. Day, Manager and Secretary, on behalf of the Company, presented the Mayoress with a cake made by Miss Crossland, and the members of the audience were given an opportunity of inspecting the large number of



This photograph was taken at one of the performances staged at Bournemouth last week by the Parkinson Stove Company, Ltd., in collaboration with the Bournemouth Gas and Water Company. Particulars of this novel form of dramatic advertising—" learn while you enjoy "—are given on this page.

THE NEWS—*continued.*

entries exhibited, and the numerous heating. cooking, and lighting appliances.

That the exhibition was a very successful one was evidenced by the large attendance on each day, and it is due to Mr. Day, who was to a great extent responsible for the admirable arrangements, and his energetic staff, that such excellent results were achieved.

Effluent at Greenbank Gas-Works.

A scheme for the treatment of effluent from Greenbank Gas-Works, Blackburn, formed the subject of inquiry at Blackburn, on September 20, by the Ministry of Health. The Council sought sanction to borrow £2392 for the erection at the gas-works of a balancing tank with a capacity of 350,000 gallons with an automatic flow and gauge.

The Town Clerk said that as a result of complaints by the Sewage Works Manager and the Ribble Joint Committee regarding pollution, a scheme was prepared for constructing five additional percolating filters, with five new humus tanks, at Samlesbury at a cost of £11,250. The Borough Engineer said the proposal was a genuine effort to tackle the first part of the problem.

The Chief Inspector of the Ribble Joint Committee, asked for sanction to the scheme as soon as possible. His Committee were anxious the work should be carried out quickly so that a decision could then be reached as to what was required at Samlesbury.

New Scale of Charges at Plymouth.

The Plymouth and Stonehouse Gas Light and Coke Company gave notice on Sept. 21 that a new and lower scale of charges would come into operation after the meter readings for the September quarter in respect of all gas consumed by ordinary meter in the Company's area of supply in Plymouth and Stonehouse.

After the first 5000 c.ft. of the total consumption for the quarter at 7½d. per therm (2s. 9¾d. per 1000 c.ft.) the remainder will be charged at one of the following scales, according to the total consumption for the quarter:

		Per Therm.
Scale A—Over	5,000 and up to 20,000 c.ft.	6½d.
Scale B—Over	20,000 and up to 50,000 c ft.	6d.
Scale C—Over	50,000 and up to 100,000 c.ft.	5¾d.
Scale D—Over	100,000 and up to 250,000 c.ft.	5½d.
Scale E—Over	250,000 and up to 500,000 c.ft.	5d.
Scale F—Over	500,000 and up to 1,000,000 c.ft.	4½d.
Scale G—Over	1,000,000 and up to 1,500,000 c.ft.	4¼d.
Scale H—Over	1,500,000 and up to 2,000,000 c.ft.	4d.

or approximately 1s. 6d. per 1000 c.ft.

These charges, it is pointed out, apply to gas consumed in premises under one roof or connected, and are for prompt payment. Additional charges of 2d. per therm will be made to consumers in the outlying districts of Brixton and Yealmpton and of 1½d. in all other outlying districts. There is no change in the charges for gas in the case of prepayment meters. The new charges offer substantial reductions in price in certain cases, and are calculated to encourage a still wider use of gas, particularly for central heating, water heating, and for commercial and industrial purposes.

Metropolitan Gas Company of Melbourne.

Speaking at the One Hundred and Eleventh Half-Yearly Meeting of the Metropolitan Gas Company (Melbourne), held at the Offices of the Company on Friday, July 28 last, the Chairman, Sir John Grice, said:

During the half-year, which was somewhat uneventful, revenue from gas sales totalled £570,007, compared with £583,643 for the June period of 1932. This decrease is more than accounted for by the fact that the price of gas was reduced by 2d. per 1000 c.ft. as from Feb. 12 last. The sales for the six months were 1,855,972,000 c.ft. against 1,849,415,000 c.ft. for the corresponding half of 1932—an increase of 6,557,000 c.ft. The Company carbonized 104,220 tons of coal.

From residuals the revenue amounted to £83,561, or £1260 less than for the same half of 1932. The demand for coke has been satisfactory, and stocks have been reduced to a minimum. Sales of tar to both municipalities and tar distillers showed a substantial increase. Deliveries of tar products to the Country Roads Board for road work in the State included 278 tons of primer coat tar and 493 tons of "Bitural."

The net profits for the half-year were £95,517. From this amount £10,000 has been transferred to Reserve Fund, and the Directors now recommend that a dividend at the rate of 6s. 6d. per share (equal to a return of 7·97% per annum on the capital subscribed by shareholders) be authorized for the half-year, leaving an amount of £1017 to be added to the carry-forward, making this balance £61,943.

Renewed activities in the building trade have been reflected in substantial increases in sales of domestic appliances. Sales of cooking stoves showed an increase of 367 over the June half of 1932.

Low-Temperature Carbonization.

Development in 1932.

In the course of the annual report of the Secretary for Mines for the year 1932, it is stated that research and experimental work on low-temperature carbonization has been carried on for a considerable number of years. In 1927 a commercial-sized plant was put into operation, and since then quite substantial progress has been made. In 1932 low-temperature carbonization was carried on at ten plants on a commercial or semi-commercial scale, and at these plants 222,616 tons of coal were treated. This is an increase of 8519 tons compared with 1931, and of 18,170 tons compared with 1930.

The principal product of the industry is a semi-coke of which from 14 to 15 cwt. are usually obtained from each ton of coal treated. Practically the whole output is sold for domestic purposes. As the coke ignites easily, burns freely, and is practically smokeless, it is particularly favoured for use in the domestic open fire and commands a price slightly in excess of that for best house coal. The chief bye-products are tar, of which from 15 to 20 gallons may be obtained from each ton of coal treated, and gas.

Information furnished to the Department relating to this industry and showing the position during the past three years is given in the following table:

Development of Low-Temperature Carbonization in 1930, 1931, *and* 1932.

—	Unit.	1930.	1931.	1932.
		Total Quantities.		
Coal distilled	Tons	204,446	214,097	222,616
Products—				
Semi-coke	Tons	142,103	151,729	162,797
Gas*	1000 c.ft.	2,142,000	1,744,000	1,287,000
Tar	Galls.	2,812,504	3,118,131	3,091,537
Crude spirit from gas	Galls.	252,280	374,390	429,755
		Production per Ton of Throughput.		
Products—				
Semi-coke	Cwt.	13·9	14·2	14·6
Gas	Therms	32·7	33·0	32·1
Tar	Galls.	13·8	14·6	13·9
Crude spirit from gas†	Galls.	1·2	1·7	1·9

* The yield of gas varies widely according to the process and the kind of coal treated.

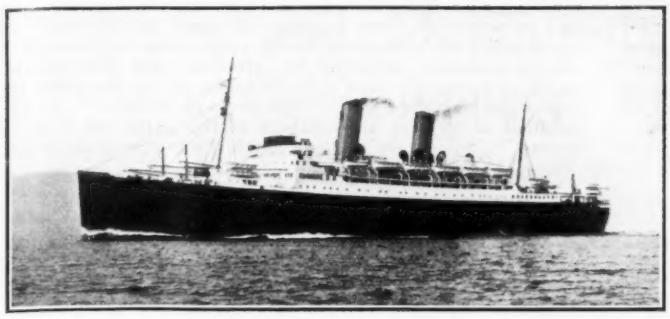
† Spirit is not "scrubbed" from the gas at all plants. The average yields calculated on the coal distilled at the plants where the gas is "scrubbed" are as follow: 1·6 galls. per ton of throughput in 1930, 1·9 galls. in 1931, and 2·2 galls. in 1932.

Gas Undertakings Small-Bore Rifle League.

The following is the League Table of the Gas Undertakings Small-Bore Rifle League:

Name of Club.	Shot.	Won.	Lost.	Drawn.	Points.	Aggregate.
Beckton A.	10	10	0	0	20	5801
Hull A.	10	7	3	0	14	5762
Beckton B.	10	6	4	0	12	5470
Harrogas	10	4	6	0	8	5561
Cambridge	10	3	7	0	6	5560
Hull B.	7	0	7	0	0	3606

The members of the Beckton "A" team are each to receive a silver medal from the Society of Miniature Rifle Clubs and Mr. H. Abraham, a member of the team, one from the League for his fine average score of 98·4.



On Board the Canadian Pacific 20,000 ton steamship "Duchess of York."

THE INSTITUTION TOUR

By THE EDITOR

LIVERPOOL TO MONTREAL.

Some of the members of the Institution of Gas Engineers who about three months ago, when starting upon the annual excursion, were privileged to pass under the River Mersey, by means of the new tunnel which connects that city with Birkenhead, were already looking forward to the time when they would be passing on the surface of the same river towards Canada and the United States. The time arrived on Friday, Sept. 8, on the morning of which day the great majority of the party of sixty who are taking part in the tour left Euston by the special boat train. A number of friends had assembled to see us off, among them being noticed Mr. W. J. Smith, the Secretary of the National Gas Council, and Mr. Arthur L. Griffith, the Secretary of the Society of British Gas Industries. Riverside, Liverpool, was reached in good time, and soon we were on board the "Duchess of York," where the Immediate Past-President, Mr. Ralph E. Gibson, was waiting to wish us "Bon Voyage." Before settling down in our comfortable quarters, a group photograph* was taken on the sun deck by a Canadian Pacific representative. At 2.30 the bugle sounded for "All visitors ashore," and, "punctuality being the soul of seamanship," a few minutes after the appointed time we were steaming gently down the Mersey, with about 1000 souls on board, of whom round about 700 were passengers.

It is a point worthy of note that the sailing lists are now beginning to offer tangible evidence that things are gradually improving. Of the cabin passengers on this voyage, our party probably accounted for some 25%.

Who's Who.

The names of the members of the party appeared in the number of the "Journal" for Aug. 16, and it is needless to recapitulate them here. It may, however, be mentioned that Mr. Frank P. Tarratt, Engineer to the Newcastle-upon-Tyne and Gateshead Gas Company, the President, Col. W. M. Carr, T.D., Engineer, General Manager, and Clerk to the Stretford and District Gas Board, one of the Vice-Presidents, Mr. Thomas Carmichael, Engineer and General Manager of the Portsmouth Gas Company, a Member of the Institution Council, and Mr. J. R. W. Alexander, the Secretary, who is a Member of Council of the International Gas Union, are officially representing the Institution of Gas Engineers. The Central Executive Board of the National Gas Council of Great Britain and Ireland have appointed to represent them Mr. Tarratt, Mr. W. J. Grey, General Manager and Secretary of the Alliance and Dublin Consumers' Gas Company, and Col. W. M. Carr, T.D. Mr. Thomas Carmichael represents the British Commercial Gas Association; while the Society of British Gas Industries are officially represented by the Chairman, Mr. H. E. Bennet, M.C., of Messrs. Alder & Mackay, Ltd. There is also of the party M. Fritz Escher, Dipl.Ing., President of the International Gas Union, and Director of the Zurich Stadt Gas-Works.

It will be remembered that we had the pleasure of seeing M. Escher in London in June, 1931, at the holding of the first International Gas Conference. At that time, a photographic group appeared in the "Journal," in which M. Escher is seen sitting on one side of the President (Mr. H. E. Copp), with M. A. Baril, of Paris, on the other. M. Baril who is Vice-President of the Union Internationale de l'Industrie du Gaz, Past-President of the Association Technique de l'Industrie du Gaz en France, and Assistant General Manager of the Société d'Eclairage, Chauffage, et Force Motrice, is one of the members of the French Gas Industry joining the British party at Montreal. There are also in the same photographic group Mr. C. E. Paige and Major Alexander Forward, whom we shall have the pleasure of meeting once again.

In addition to members of the party representing England, Mr. George Braidwood, of Coatbridge, is, of course, a member of the North British Association of Gas Managers; Mr. J. D. Smith, of Belfast, is similarly connected with the Irish Gas Managers' Association; Mr. C. Holmes Hunt is a Director of the Colonial Gas Association; Mr. E. P. Stevenson (who will be joining the party at Chicago) is Technical Officer of the Primitiva Gas Company of Buenos Aires; and Mr. E. S. Symonds is connected with the Imperial Continental Gas Association.

The President and Col. Carr joined the party at Liverpool, and late in the evening Mr. and Mrs. J. D. Smith came aboard at Belfast. Earlier, there had been an informal reception in the Observation Room.

Outward Bound.

Saturday morning witnessed the continuance of brilliant weather, and before mid-day we were off Greenock, where the tender brought alongside to greet us friends from the North, among them being Mr. David Fulton and Mr. J. E. Blundell. Then we took leave of the beautiful River Clyde, and turned our eyes towards her noble sister, as rich in historical associations as herself, and possessing another sort of natural beauty—the great River St. Lawrence. We all know our Clyde, but many of us will see the St. Lawrence for the first time. We are convinced that whatever may be the case when women are concerned, every one of us will be able to love two rivers at the same time.

Saturday proved uneventful, but by teatime we had passed through our life-belt drill, and before it was quite dark we had left behind us the northernmost point of Ireland. Our voyage across the Atlantic had begun.

The weather held until Monday morning, when we awoke to that familiar sound of the sea, the fog syren. With the exception of an hour of bright sunshine, which was made the most of by the photographers of the party, the ship was all day shrouded in a damp mist, but good spirits prevailed over depressing weather conditions, and we were further heartened by the receipt by the President of a Marconigram from the Hon. Secretary, Mr. W. E. Price: "Convey to all my best wishes for trip." The morning of Tuesday was heralded in by the fog syren. Then there was a spell of magnificent weather, which, however, flattered only to deceive; for, as time went on, "sea legs" became of increasing importance. In the evening there was a grand sea running, but though the night was roughish, it seemed to cause little inconvenience to members of our party. After lunch on Wednesday we were passing Belle Isle, and within a couple of hours of this time Col. Carr sighted the first two icebergs, close up against the island, some five or six miles away. For this afternoon a "get-together" tea had been arranged for our party in the dining-room, and at this the President extended a general welcome, and the Secretary made some announcements with regard to our programme during the first few days following our landing. The result was to whet our appetites; for it is evident that our hosts have determined upon giving us the best of good times.

This was the night of the ship's concert, at which all the items were rendered by the officers. It was an enjoyable evening, and our party were especially proud, for the great compliment was paid the President of asking him to take the chair. His appeal on behalf of the various seamen's charities to whom the collection was dedicated was sympathetic, and his phrases were well chosen. As he said,

* Published in the "Journal" for Sept. 13.

"God loves a cheerful giver." And there were many cheerful givers present. Outside the concert hall—which was the dining room—we look out upon the Gulf of St. Lawrence. She is receiving us graciously; it is a good omen! But the gentle moaning of the wind, and the suggestive motions of the ship, remind us of all we owe to those seamen on whose behalf the collection was made. If God loves a cheerful giver, He surely loves a good seaman.

Those who were up early on Thursday morning had the satisfaction of seeing a whale spouting, but it was not a large crowd. The day was, perhaps, the most brilliant we had experienced, but passing through the Province of Quebec the air had a very sharp touch about it, though in nowise sufficient seriously to interfere with deck sports. In the evening the mail is to be taken off by the pilot, for return to England by the "Empress of Britain." At the moment of writing all members of the party are "going strong." Spirits are rising, though the temperature is not.

CARBURETTING OILS

Examination and Evaluation

P. Schläpfer and S. Schaffhauser, in *Monatsbulletin des Schweiz Vereins von Gas- und Wasserfachmännern*, 1933, 13, 125-143, 159-168, and 193-204 (June, July, and August), present a comprehensive account of a laboratory investigation on gas oils used for the enrichment of water gas. Full details are given of the properties of the various gas oils investigated and of the apparatus employed for the study of the carburetting value of the oils under different conditions of temperature and rate of admission. The utility of the laboratory method was demonstrated by a comparative test carried out on one of the oils in a large carburetted water gas plant.

The object of the investigation was to ascertain whether it is possible to draw conclusions as to the carburetting value of a gas oil from its physical and chemical properties. Experiments were carried out at temperatures ranging between 650° and 790° C., and the rate of admission of oil was varied so that the effect of temperature and rate of admission of oil might be correlated with the yield of gas, the composition of the gas, the calorific value of the gas, and the yield of gaseous B.Th.U. per lb. of oil. The investigation included the determination of the specific gravity, distillation characteristics, Ostwald constant (average boiling point) at 10 mm. Hg., dispersive power for the red and blue hydrogen lines, ultimate composition and chemical nature of the hydrocarbons of the various oils employed; and experiments were carried out, also, on narrow fractions (16° C. cuts) of one of the oils.

Further experiments were carried out to provide information as to the extent to which hydrogen affects the cracking of gas oil and whether there is any relationship between (1) the carburetting value as deduced from physical and chemical constants, (2) the efficiency obtained when the oil is cracked by itself under controlled experimental conditions, and (3) the efficiency obtained when the oil is cracked in a current of hydrogen under conditions comparable with those existing in practice in the manufacture of carburetted water gas of a calorific value up to 560 B.Th.U. per c.ft.

The following conclusions were reached.

(1) The temperature and the rate of admission of oil are the dominant factors concerned in the cracking process. When the temperature is increased and the rate of admission of oil is constant, the gas production (B.Th.U. per lb. of oil) in the range 650°-800° C. increases due to greater cracking, but the calorific value of the cracking products progressively decreases. At a constant temperature but with increasing rate of admission of oil, the gas yield falls but the calorific value increases.

(2) The results obtained in the various experiments may be suitably expressed by means of Hempel's carburetting index (B.Th.U. obtained per lb. of oil employed). If this index is used as a criterion, it appears that the optimum cracking temperature lies between 700° and 750° C., and that for the index to be at a maximum the oil must be admitted at a specific rate depending on the nature of the oil.

(3) The results obtained under similar conditions with gas oils of the most varied origin and composition differ mainly in the amount and percentage composition of the gas produced, but to a less extent in the actual nature of the constituents of the gas.

(4) Temperature and rate of admission of oil affect, also, very appreciably the amount and composition of the tar produced. Gas oils rich in hydrocarbons boiling below 300° C. yield, under similar conditions, a tar having a lower specific gravity and richer in volatile oils than do gas oils boiling mainly above 300° C. With a constant rate of admission of oil and increasing temperature, the specific gravity of the tar increases and the quantity of tar decreases, whereas, at a constant temperature, the specific gravity of the tar decreases and the quantity of the tar increases if the rate of admission of oil is increased.

(5) When oil is introduced at a constant rate into differing amounts of hydrogen at different temperatures, it is found that

(*a*) The main reaction of the hydrogen is its fixation by the nascent products of cracking, chiefly by the radicals of high molecular weight.

(*b*) The available thermal units in a given volume of oil are made use of much more efficiently since the calorific value of the gaseous hydrocarbons increases by 90-225 B.Th.U. per c.ft. depending on the temperature and on the amount of hydrogen employed (*i.e.*, by 8-20% of the calorific value of pure oil gas).

(*c*) A considerable reduction in volume occurs in comparison with the volume which would be obtained under similar conditions from a mere mixture of straight oil gas with the quantity of hydrogen used in the experiment.

(*d*) If different oils are experimentally cracked in a current of hydrogen under the conditions existing in practice in the production of carburetted water gas having a calorific value of 560 B.Th.U. per c.ft., the curve of the indices of efficiency is parallel to those obtained in tests on the oils alone.

(6) Apart from the effect of temperature and rate of admission of oil, the carburetting value of an oil depends on the physical and chemical properties of the oil. Gas oils containing 50% or upwards of constituents boiling below 300° C. are not suitable as carburetting oils. However, the chemical composition, which may satisfactorily be expressed in terms of the specific gravity and the average boiling point may have an important effect.

(7) The effect of the average boiling point and of the structure of the hydrocarbons on the carburetting value was clearly shown in experiments on narrow (10° C.) fractions of a gas oil.

(8) The expression for carburetting value proposed by Holmes (*Ind. Eng. Chem.*, 1932, 24, 325) and depending on the average boiling point, the specific gravity and the dispersion (red and blue hydrogen lines) was shown to apply reasonably well. A further expression $B = \frac{KH}{G}$ for carburetting value (B) based on the hydrogen content (H) of the oil, the average boiling point (K° C.) under 10 mm. pressure, and the specific gravity (G) may be employed. It characterizes the carburetting value of oils even better than does the Holmes index. A good carburetting oil should have a carburetting value of at least 2600 on this basis.

The experiments show that it is possible to assess the value of gas oils for carburetting purposes, as a result of the determination of a few simple physical and chemical constants. The correct interpretation of the distillation curve is, however, of great importance, since fractions of low boiling point are prone to escape decomposition in the carburetting chamber.

Wales and Monmouthshire Association of Gas Engineers and Managers

MEETING AT PORTHCAWL, SEPT. 21

The atmosphere of what nowadays might well be described as the "Annual Porthcawl" Meeting of the Association was clouded by serious news of the President-Elect, Mr. W. Collin, of Bridgend. He had been taken ill ten days before, and had been removed to the local hospital, where he was to undergo an operation that day. There were may expressions of regret at Mr. Collin's absence, and it was decided to convey messages of sympathy to him and to the Directors of his Company. The induction ceremony was deferred, but in the course of the proceedings Mr. Collin was elected to represent the Association on the Council of the Institution of Gas Engineers for the year commencing June, 1934.

Death of Mr. W. Collin.

A few hours later, after the members had dispersed, and just before the operation was to have been performed, Mr. Collin passed away.

Mr. Collin, who was 58 years of age, had been Manager of the Bridgend Gas-Works for the past eight years. Previously he had been Manager at Coquimbo, Chile, and had also acted in a similar capacity for many years at Porthcawl. He was a widower, and is survived by three sons. He was a member of the Ogmore Lodge of Freemasons, Vice-President of the Bridgend Rugby Club, and a member of the Bridgend and Coity Golf Club.

Gas Extensions at Porthcawl.

There was an added interest to this year's visit of the Association to Porthcawl, as it synchronized with the official inauguration of extensions to the Gas-Works—an installation of Glover-West Vertical Retorts; and during the afternoon members attended the opening at the invitation of the Porthcawl Council.

At the opening of the meeting, which was again held in the handsome new pavilion on the Esplanade, the chair was occupied by Mr. Ifor G. Jenkins, of Abertillery, the retiring President. There was a good attendance of members, and among the visitors was Mr. A. Clement Hovey, ex-President of the North of England Gas Managers' Association. The members were most heartily welcomed to the town by Councillor D. J. Rees, J.P., Chairman of the Porthcawl Urban District Council, who was accompanied on the platform by Mr. Ashton Bremner, Chairman of the Gas Extensions Committee.

Councillor Rees remarked that although that was not the first occasion members of the Association had met at Porthcawl, probably many of those present had never seen the handsome pavilion before. They would probably agree with him that it was a great acquisition to the town, and would enable the Local Authority to provide most suitable accommodation for any trade or professional body that came along. Referring to the opening of part of the extensions to the Gas-Works, he expressed the hope that some of them would learn something that would be of some assistance to them in guiding their respective authorities in the provision of gas in a more efficient and satisfactory manner. The only thing that they had been short of in Porthcawl was gas; it had been stated that there was a shortage of water there, but they must not believe everything they read in the daily newspapers. With regard to gas there was no doubt that the demand had been far greater than the supply. He happened to be one of those who had had to put up with an electric cooker, but he hoped that now the local Council would be able to bring gas near enough for him to use it. Porthcawl was growing very rapidly, while the number of visitors was increasing every year—one day this season over 100,000 people came into the town.

Councillor Ashton Bremner added a few words of welcome, and the President thanked Councillor Rees and the Urban District Council.

The minutes of the last meeting were then read by Mr. Octavius Thomas, the Hon. Secretary, and confirmed.

New Members and Associates.

The following additions were made to the membership of the Association:

Member.—Mr. Ben Jones, Engineer and Manager, Bedwellty.

Associates.—Messrs. C. H. Davidson, R. & J. Dempster, Ltd.; C. R. Averill, C. R. Averill, Ltd.; W. T. Newton, the Woodall-Duckham Companies.

The Men of the Future.

Mr. A. C. Hovey, ex-President of the North of England Association, was then called upon to present the examination certificates and prizes to members of the Wales and Monmouthshire Junior Gas Association. Before doing so Mr. Hovey said the North of England Association had inaugurated a similar scheme to that which the Wales and Monmouthshire Association had had for a number of years. They would all agree that the younger members and associates were the hopefuls of the future; they would have to rely upon them for the continuance of the Industry, and they would expect them to surpass their forebears. They had great respect for the younger members and associates, and they had great sympathy with them because they knew they had a hard job in front of them. They also recognized that in regard to their work and conduct they did not require too much advice—they were serious minded. He was greatly impressed with the general calibre of the younger men, who seemed intent on conducting the industry in such a manner as to ensure progress on the right lines.

The prize winners were as follows:

For work done for the Wales and Monmouthshire Junior Gas Association.

C. S. Thane	Newport, President.
A. J. Cruise	Cardiff
W. J. Viney	,,
H. V. Williams	,,
R. T. Mills	,,
A. D. Howells	Neath

For having passed Second Class Higher Grade Gas Supply.

R. R. Brown	Cardiff
W. W. Beech	Newport, Mon.

For having passed Internal Gas Fitting Examination, Cardiff College.

A. D. Crosta	Cardiff	Stage 1
D. E. Kemp	,,	,,
F. R. Price	,,	,,
A. T. Cottrell	,,	,,
W. N. Little	,,	Stage 3
J. G. Thomas	,,	,,
R. H. Walrond	,,	,,
V. Beer	,,	,,
L. Millan	,,	,,
A. R. Blight	,,	Stage 4
R. J. Parker	,,	,,
S. Arrowsmith	,,	,,
R. Francis	,,	,,
S. C. Rooker	,,	,,
B T. Lloyd	,,	,,
G. V. Humphreys	,,	,,

For having passed Gas Fitting Examination, City and Guilds of London Institute.

R. Drewell	Newport	Grade 1
Kenneth Hunt	,,	,,
W. Connor	,,	Grade 2
A. Perrett	,,	,,

Special Purposes Section.

Mr. E. A. Ablett (Swansea) moved the adoption of the 23rd Annual Report of the Special Purposes Section, this being seconded by Mr. L. W. Nuttall and unanimously agreed to. The report stated that two Meetings had been held, one Company had joined during the year, and the membership now consisted of ten Local Authorities and twenty-two Companies. Fortnightly reports of the stocks of coke, together with the prices received, had been circulated and prices maintained. To deal with the surplus coke, an arrangement was made with a coke shipping factor, which had proved very beneficial to the members. Discussions had taken place on several important questions including coke, coal, tar, sulphate, &c. The receipts for the year amounted to £49 14s. 6d. and the payments to £50 3s. 5d., leaving with the balance brought forward the

sum of £54 4s. 1d. in the hands of the Treasurer, together with £300 2½% Consols.

What is Wrong with the Gas Industry?

Under this title, a paper was then read by Mr. D. A. Pratt, of York, which, together with the excellent discussion, is reproduced elsewhere.

Presentation to President.

At the close of the meeting Mr. Jenkins, the retiring President, was the recipient of a silver salver, presented to him by Mr. Madden, on behalf of the Association, as a memento of his year of office.

In acknowledging the gift, Mr. Jenkins said he felt grateful to all the members, and particularly to Mr. Madden and Mr. Canning, Past-Presidents, for their support and advice. He paid a high tribute to the services of the Hon. Secretary, Mr. Octavius Thomas, who "had been a true friend and counsellor," and whose kindness and advice would never be forgotten.

Luncheon.

At the close of the business meeting, luncheon was served at the Esplanade Hotel, with the President in the chair. The toast of "The Town and Trade of Porthcawl" was proposed by Mr. R. G. Shadbolt, a Past-President of the Institution of Gas Engineers, and responded to by Councillor D. J. Rees, J.P., Chairman of the Council.

Mr. John West then presented the Golf Cup to Mr. F. Boardman (Cardiff); and "The Wales and Monmouthshire Association" was submitted by Mr. A. C. Hovey, and responded to by the President.

The party then adjourned for the function at the Gas-Works, a report on which appears on other pages of this issue.

Golf Meeting.

For the Golf Meeting on the famous links of the Royal Porthcawl Club, the usual smoothly efficient arrangements had been made by Mr. Octavius Thomas and Mr. Joe Sadler; and the result was a delightful day's pleasure, in spite of unkind weather in the afternoon. The Association Cup to Mr. Boardman was a most popular win.

The leading returns were as follows:

Medal Play for the Cup.

F. Boardman	89 − 16 = 73
C. R. Averill	88 − 13 = 75
C. L. Bury	97 − 18 = 79

Bogey Foursomes.

B. Grainger and H. Butterworth	6 down
T. B. Walker and H. Stephens	8 down

The dinner in the evening was exceedingly well attended, and Mr. H. D. Madden took the chair in the regretted absence (on holiday) of Mr. R. J. Auckland. Other absentees who, as the Chairman said, were much missed by all included Sir Francis Goodenough, Mr. W. E. Price, Mr. Collin, Colonel Ogilvie, and Mr. Shapley. Among the guests, however, were Mr. McEwen (Captain), Captain Nelson (Secretary), and Mr. Hutchinson, the far-famed Professional, of the Royal Porthcawl Club, and Mr. J. H. Canning most admirably expressed the company's welcome to them when he proposed "The Royal Porthcawl Golf Club—one of the greatest institutions in our district." A golf club's status, he said, was largely due to its captains, and Mr. McEwen had received the signal distinction of being elected captain for a second year.

After dinner many of the visitors adjourned to Ye Pirates' Club, whose management had again kindly opened its doors to members of the Association.

British Commercial Gas Association

Twenty-Second Annual Report of the General Committee

The Report, which was submitted at the Conference of the B.C.G.A. at Bournemouth yesterday, covers the work done during the past twelve months.

The payment of members' subscriptions has been maintained at the level of the previous year. The Association's income, it is true, shows a decrease of £2554; but this decrease is due very largely to increased expenditure by the National Gas Council and the Institution of Gas Engineers on Legal and Parliamentary work and Technical Research. This automatically diminished the amount available for the Association.

During the year under review, competition has become more intense than ever. The completion of the electrical "grid" and the urgent need of securing an increase in revenue to offset the heavy capital charges that will have to be met in the future will undoubtedly induce greater efforts to increase the use of electrical energy. It is common knowledge that a largely augmented appropriation for electrical publicity is foreshadowed for the coming year. With these facts in mind, the General Committee emphasizes the need for augmenting the funds at the disposal of the Association, and especially urges upon all undertakings the desirability of contributing—as the majority now do contribute—at the full rate of 7s. 6d. per million c.ft. to the pool from which the work of the three National Bodies is financed.

Staff Re-organization.

The scheme of staff re-organization outlined in the Twenty-first Annual Report has now been in operation at Grosvenor Gardens for fourteen months. Economy of effort and expenditure has been secured while efficiency has been maintained. Centralization has resulted in close, constant, and easy contact between the various sections of the staff, which has thus become a flexible administrative unit. In consequence, the task of co-ordinating the many different activities of the Association has been simplified.

After an exceptionally busy year's working, the General Committee has reason to be satisfied with the success of the scheme. The Committee would here place on record its appreciation of the originality and resource with which the inevitable difficulties of the period of transition have been met by the General Secretary and the senior members of the staff who last year were required to assume fresh duties and responsibilities.

Press Publicity; National and District.

The Association has aimed at increasing the effectiveness of its publicity in the National and District Press by the use of larger spaces. Two main campaigns have been conducted; the first, the "Thank Goodness for Gas" campaign, ran through last autumn with advertisements of gas fires, and was continued during the spring months with advertisements of hot water. A gratifying result of the spring campaign was that it brought more inquiries than any previous series of advertisements issued by the Association.

The second campaign, in the early part of the summer, was an innovation in gas advertising methods, first introduced by the Gas Light and Coke Company. The desire to popularize the "Therm" method of charge for gas in the mind of the public was given a personal touch in the symbolic figure of "Mr. Therm." The Association's part in the campaign was concentrated over a period of six weeks in the National Dailies, and large advertisement spaces were used. An illustrated booklet, which supplemented the theme of the advertising in a general way, and described the use of gas for a variety of purposes, was distributed to inquirers and also supplied to members for local use.

The General Committee is satisfied that this experiment has been well justified. "Mr. Therm" has been mentioned on the stage, written up in the Press, heard on the gramophone, featured in a considerable number of gas showrooms in various parts of the country, and has won prizes at carnivals. The General Committee desires to place on record its appreciation of the preliminary "Mr. Therm" campaign which the Gas Light and Coke Company originated and ran in the London evening papers. This contributed materially to the success of the Association's subsequent campaign in the National Daily newspapers.

Special advertisements have appeared regularly in the professional, technical, and trade journals. Plans are now being made, in consultation with the Technical-Industrial Development Committee, for the production of special publicity material to be distributed among several of these groups of potential gas consumers.

Press Contact.

Relations with the Press during the year have been very satisfactory. References in the domestic and other magazines to the use of gas have increased in number. It may be said that journalists generally find an increasing "news value" in the development of the Gas Industry; this is especially noticeable in the Press accounts of such functions as the British Industries Fair and the various conferences and centenary celebrations which have lately taken place. As a single instance it may be mentioned that no less than

16,000 single column inches of editorial comment were accorded in newspapers to the last Conference at Leeds. This is equal to 800 columns of matter, or more than 100 pages of a national newspaper.

Exhibitions.

The Association co-operated with the Committee responsible for the organization of the Gas Industries Section of the British Industries Fair and, with the members of the Heavy Section of the Society of British Gas Industries, was again responsible for the Gas Industry Information Bureau.

The Gas Industries Section, as a whole, received much useful and valuable publicity. The Association, in conjunction with the City of Birmingham Gas Department, gave much attention to the use of gas for industrial purposes.

The Joint Industrial Exhibit, arranged by the Association and organized and staffed by the Gas Light and Coke Company and the Birmingham, Newcastle, and Sheffield undertakings, was an outstanding feature of the Gas Industries Section, and a large number of valuable inquiries was received from manufacturers who visited the Exhibit. Many columns of editorial comment were devoted to the industrial applications of gas at the Fair. The use of compressed gas for motor vehicles, which was featured at the Fair, aroused a considerable amount of interest among the public and secured some useful editorial publicity in the Press.

The Joint Industrial Exhibit is again to be staged—but on a much larger scale—at the 1934 Fair.

When the Building Centre was organized as a permanent exhibition of interest alike to builders, architects, and householders, the Association, in co-operation with the Gas Light and Coke Company and the Society of British Gas Industries, in view of the Gas Industry's interest in the housing problem, organized a display of gas equipment.

Among other exhibitions in which the Association has participated was the Exhibition of Industrial Art in Relation to the Home, which was held in Dorland Hall, Regent Street, and drew many important visitors.

Local Publicity.

During the current year the Association has assisted in more schemes of local advertising than ever before.

The last volume of advertisements for local use has proved extremely popular, and another volume is in hand. In addition, a great number of special advertisements have been prepared for members' own use, including several booklets and leaflets bearing on local conditions. Among these may be mentioned pamphlets on comparative fuel costs; lantern slides; designs for stage curtains; and children's painting competitions.

Two features are worthy of special note:

(1) There has been an increasing and gratifying tendency on the part of members to "tie-up" their own publicity with the National advertising schemes. As an instance, a broadsheet bearing the first "therm" advertisements drew requests for nearly 400 stereos. A number of members who make use of stereos are adapting the copy of their advertisements to local conditions with much success.

(2) Members have made full use of Press publicity on occasions of special local significance. Some, for instance, have called on the co-operation of the Association when a change of price was announced; others have enlisted help in fighting severe competition. At the same time many local papers have given prominence to articles bearing on the use of gas, and the Association has always been pleased to lend editorial help.

Among local occasions in connection with which the Association's staff has been helpful may be mentioned the opening of new works at Oldham, by Prince George; at Lincoln, by the Minister of Mines; at Weymouth, by the Executive Chairman; and the Centenary celebrations at Dumbarton, Bedford, Wellingborough, and Morpeth. Special booklets were issued by these undertakings, and a good deal of valuable Press publicity was gained.

In this connection may be mentioned the successful B.C.G.A. Conference at Halifax, which attracted much attention in the West Riding.

Printed Propaganda.

A notable feature in the conduct of "A Thousand-and-One Uses for Gas" has been the issue of authoritative articles on the industrial uses of gas. These have been quoted at length in the English Technical Press and in some cases have been translated by foreign technical papers.

Other issues have dealt with Bread Baking, Fish Frying, Newspaper Printing, School Heating, and Large-Scale Cooking. All of these have received excellent Press notices; and it is satisfactory to report that sales to members have increased, though there is still very great further scope for profitable distribution of this advertising medium among professional men, manufacturers, and local authorities.

The Christmas issue of "A Thousand-and-One Uses for Gas," to which many well-known women journalists contributed special articles, was this year even more widely reviewed and sold better than ever. Many member undertakings used it as propaganda at cookery demonstrations and showroom displays.

The Flambeau has made great strides, net sales to undertakings having increased by 50% in the current year. This is due to progressive improvements in the format and contents of the magazine. It is proposed to increase its size in the near future. This form of propaganda is now being more generally exploited, not least by our competitors, and *The Flambeau* has already established its popularity among those consumers who have received it. The Committee looks forward with confidence to its more widespread distribution by undertakings generally.

Lectures.

The scheme inaugurated in the early part of 1932 for providing the services of qualified lecturers has continued during the past year, and lectures have been given to the senior science classes at 60 schools, with an average attendance of 116 teachers and scholars per lecture. Lectures have also been given at ten Architectural Schools and Universities. The Committee regards this particular piece of work as of outstanding importance, as the opportunity has been given to the Association of presenting the case for gas to no fewer than 539 future architects.

In addition, lectures have been given at several Rotary Clubs and Public Libraries, the whole covering a total of 8000 people.

The Association, in co-operation with members, has already taken steps to secure additional channels through which this work can be effectively developed.

Women's Organizations.

The desirability of providing an organization through which the members of Women's Societies throughout the country can be kept in touch with the developments of the Gas Industry was the subject of discussion at the Annual District Meetings in the early part of 1933, and a preliminary survey of the position is being made by the District Committees. It is hoped, in the near future, with the co-operation of the districts and members generally, to formulate a scheme of educational propaganda among the various women's organizations.

Education for Gas Salesmen.

Since the B.C.G.A. Scheme was launched two years ago, 1766 students, including 14 from overseas, have been enrolled for the "Domestic Gas Salesmanship" Course. During last year there were 285 enrolments.

Of the total number of students enrolled, 1341 have taken the final written examination. 539 were awarded 1st Class Certificates (4 with Honours and 126 with Distinction) and 740 were awarded 2nd Class Certificates.

When the Education Scheme was prepared it was realized that first-rate salesmanship must include adequate technical knowledge and instruction in the Economics of the Gas Industry and its history as a public utility. Many students who have taken the "Domestic Gas Salesmanship" Course have also qualified on the technical side, and some have carried their training still further by taking the Course and Examination for "The Economics of Gas Supply." Eight students completed their studies in the three subjects last year and secured Technical-Commercial Certificates.

It is hoped that in the future a greater number of students will qualify for a Technical-Commercial Certificate, and with this end in view the Association is preparing text books dealing with the two fields of (*a*) Technical instruction, and (*b*) instruction in the Economics of Gas Supply. These will shortly be available.

Personal.

During the year the honour of knighthood has been conferred by His Majesty the King upon Sir George C. Clayton, C.B.E., J.P., M.P., Chairman of the Liverpool Gas Company and a Vice-President of the Association, and upon

Alderman Sir Edward W. Willis, J.P., Chairman of the Rochester, Chatham, and Gillingham Gas Company.

The following have been added to the list of Vice-Presidents during the past year:

Councillor G. E. Roberts, Chairman, City of Coventry Gas Department.

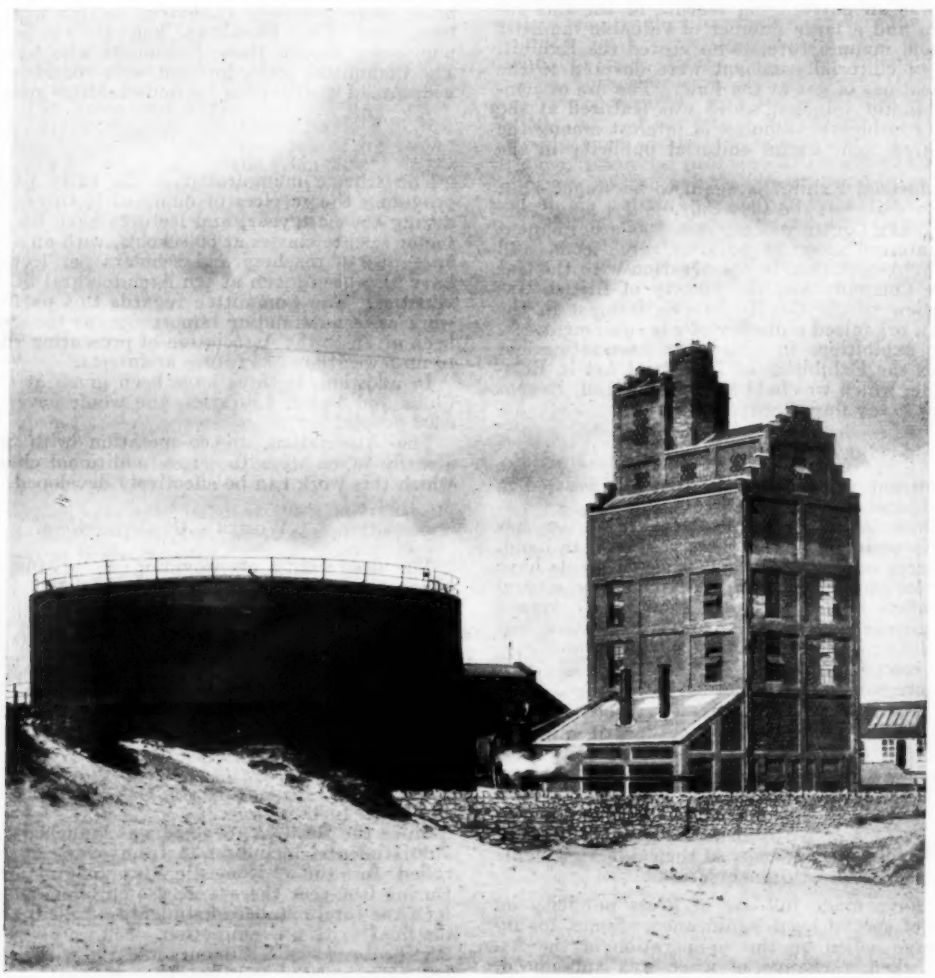
Councillor F. J. Cowie, Chairman, Bradford Corporation Gas Department.

Councillor W. Wardle, J.P., Chairman, Stretford and District Gas Board.

The Committee regrets to place on record the loss of a good friend and Past-President of the Association in the death of Mr. Alfred Procter, Chairman of the York Gas Company. It also mourns the loss of Sir Charles W. Starmer, J.P., a Vice-President of the Association and Chairman of the Darlington Gas Committee.

The Committee has the pleasure to report that Colonel H. K. Stephenson, D.S.O., LL.D., J.P., Chairman of the Sheffield Gas Company, has consented to be nominated for election as President for 1933-34.

New Carbonizing Plant at Porthcawl



THE GAS-WORKS OF THE PORTHCAWL URBAN DISTRICT COUNCIL GAS DEPARTMENT,

Showing the New Plant Inaugurated on Thursday last.

In 1915 the Porthcawl Urban District Council acquired the undertaking of the Porthcawl Gas Light and Coke Company, Ltd., after lengthy negotiations. At the time of acquisition the works were in need of improvement, but due to the difficulty of the war years no extensive scheme was embarked upon by the Council. In fact, apart from various loans for the purposes of financing the rapidly extending services, such as mains, meters, and cookers, the only actual improvement undertaken by the Council was in 1921, when a water-gas plant was installed.

It was in the years between 1927 and 1932 that careful consideration was given to possible improvement schemes, and as a result a public inquiry was held at Porthcawl on April 13, 1931, when the present scheme was put forward.

Sanction was ultimately secured for proceeding with the scheme, and Sept. 21, the day on which the new plant was officially inaugurated, marked a new milestone in the history of the undertaking, and of the development of and improvement in the amenities of the town of Porthcawl.

In 1929 a Sub-Committee was appointed to visit other gas-works to inspect the different methods of gas manufacture in operation. Finally, it was decided in November, 1932, to place a contract with Messrs. West's Gas Improvement Company, Ltd., for the construction of an installation of their Glover-West vertical retorts, together with the necessary ancillary plant to deal with the increased quantity of gas.

The installation is another excellent example of the application of the continuous vertical retort to the requirements of a gas undertaking with an annual make of about 50 million c.ft., or a maximum daily demand of about 200,000 c.ft. At first sight it would seem that to produce this quantity of gas in two or three units would present difficulties, but such is the flexibility of the continuous vertical retort that the fluctuations in demand, even when one retort only is in operation, are readily met by adjusting the output of the retort.

In the present instance three retorts are installed. They

are built in a line, and each individual retort comprises a complete setting in itself, operated independently of the others. The three settings are divided one from another by thick walls of refractory brickwork, each with a sliding joint, so that expansion and contraction can take place in one setting without disturbing the neighbouring units.

The retorts are of the Glover-West New Model, 25 ft. long, elliptical in cross-section, 50 in. over the major axis and 10 in. over the minor axis at the top, increasing gradually to within 5 ft. of the base of the retort, which is expanded in the form of an approximately conical " steaming " chamber to present the maximum area of coke surface to the action of the incoming steam.

Heating gas for the three settings is supplied from either of two step-grate producers built at ground level, one as a stand-by to the other. The fuel gas is led through a common flue to the base of the uptakes to the several settings. From the uptakes it is admitted through controlled nostrils to the horizontal combustion chambers in such a manner that the grading of the temperature of the outside of the retort can be arranged to suit the requirements of the coal under treatment and the quality of gas to be produced.

The retorts themselves are built in refractory segments, tongued, grooved and bonded to secure a gas-tight carbonizing vessel. The materials of which the segments are composed vary according to the particular retort-zone in which they are used. This " zoning " of materials to stand up to the reactions which take place during the production of gas within the retort is a practice which has been standardized upon the basis of the recent recommendations of the Refractories Research Association.

Retort House Building.

The problem of designing a building of the proportions necessary to accommodate vertical retorts, and not to conflict with the amenities incidental to a seaside residential town, has been met in a perfectly satisfactory manner. The building is no more than 37 ft. by 30 ft. in ground plan, and yet it is 71 ft. high to the apex of the main roof and 84 ft. high to the apex of the dormer housing the head of the skip hoist. It was, therefore, decided to design the building in the form of a castellated tower, and the result is particularly pleasing. It is constructed with a steel framework anchored to the retort bench, filled in with good quality brickwork, which is brought out to conceal the steel framework and extended above the eaves to conceal the roof.

Platforms and Staircases giving access to all operating and inspection platforms, and light and ventilation is afforded by the provision of steel-framed windows and glazing, augmented by openings left in the brickwork of the walls. The whole of the machinery in connection with the plant is actuated by two steam engines accommodated in a separate building to protect them from dust and weather.

Ancillary Plant.

The existing plant has been augmented by additions and extensions to the purifying apparatus and storage, the whole of this work being entrusted to Messrs. C. & W. Walker, of Donnington, working to the instructions of West's Gas Improvement Company as main contractors.

The water tube condenser is capable of dealing with 500,000 c.ft. of gas per diem, at the rate of 2½ sq. ft. of tube cooling surface per 1000 c.ft. per 24 hours. The Livesey washer is of the same capacity, as also is the rotary washer.

The new purifiers are of the modern luteless type in four boxes, each 15 ft. square by 5 ft. deep, arranged in line and fitted with valves and connections to operate in the usual rotations.

The storage capacity of the works is increased by the addition of a 56 ft. diameter lift, 21 ft. 6 in. deep, to the larger of the original gasholders, and a 45 ft. diameter lift, 16 ft. deep, to the smaller, making a total storage capacity of 145,000 c.ft. The opportunity was taken of overhauling the existing structure of the holders, cleaning the tanks and connections, and putting them into thoroughly good condition.

The Amenities.

It is claimed that the problem of extending and modernizing the gas-works of this, the most popular of the seaside resorts of South Wales, has been solved in a manner which distinctly enhances the amenities of the town. In the first place provision is made for the production of an ample supply of the most efficient of smokeless fuels—gas—while the dry, easily ignitable coke of the vertical retort is an excellent smokeless solid fuel. At the same time the nuisance inseparable from the older forms of carbonizing plant, with their attendant smoke and steam incidental to the periodical opening of retorts and quenching of coke, has been eliminated by the installation of a closed system of retorting. Finally, the architectural features of the works have been greatly improved by the addition of the new structures.

OPENING CEREMONY.

The inauguration of the Glover-West vertical retorts took place on Thursday last, and coincided with the meeting of the Wales and Monmouthshire Association of Gas Engineers. The visitors were received by Councillor D. J. Rees, J.P., Chairman of the Council, who was accompanied by the Clerk, Mr. Evan Davies; Mr. Ashton Bremner, Chairman of the Gas Extensions Committee; Mr. S. Walker, Gas Engineer and Manager; Mr. G. T. Clarke, Superintending Engineer; and Mr. John West, representing the contractors, and others.

Addressing the gathering, Mr. Rees said the extensions were long overdue. Explaining the origin of the scheme he recalled the heated controversies which had raged in the town regarding the gas-works. The delay in proceeding with the scheme, he said, was not caused by the Council. A scheme was submitted to the Ministry of Health three years ago, but as this entailed an expenditure of £20,000 it had to be curtailed. He was proud of the fact that, as Chairman of the Council, he was privileged to open the extensions.

Mr. Rees then, by pulling a lever, set the coal elevator in motion, the working of the apparatus being watched with keen interest.

On entering the building to witness the discharge of coke, the company were addressed by Mr. Ashton Bremner, who paid tribute to Mr. S. Walker. Mr. Walker, he said, was chiefly responsible for the scheme; it was on his initiative that the Council moved in the matter. He also paid tribute to Sir John Ferguson Bell, the Consulting Engineer. Despite all sorts of competition the gas undertaking had maintained its position, and the present extensions would enable it to hold its own in the future.

Councillor Rees, after replying to a vote of thanks proposed by Mr. G. T. Clarke, thanked the visitors for the interest they had shown in the undertaking and its development, mentioning the names of Mr. H. D. Madden and Mr. J. H. Canning.

Mr. Madden, in congratulating the Council on the progress already made in the development of their undertaking, said they had certainly done the right thing in constructing a plant of that kind. He paid tribute to the contractors, and, commenting on the design of the structure, said he did not know of any gas-works where the retort house was so unlike a retort house as was that one.

Mr. Canning also congratulated the Council, remarking that henceforth Porthcawl would have a good and reliable supply of gas, which, he was sure, would be appreciated not only by the inhabitants but also by those who visited the town during the summer months.

After Mr. John West had acknowledged the tributes paid to his firm, the visitors ascended the staircase to the top of the building, being conducted there in small batches.

Later in the day the company were entertained at tea at the Esplanade Hotel.

Gas Progress in Singapore.

The report on the working of the Singapore Gas Department for the year ended Dec. 31, 1932, states that the new carbonizing plant was completed and the furnaces fired on Feb. 27, 1932, and the plant is working satisfactorily. The old vertical retort house has been demolished and the site cleared.

The amount of gas manufactured was 300,112,000 c.ft. against 321,286,000 c.ft. during 1931, a reduction of 6·59%. Of this quantity 119,696,000 c.ft. was water gas, equal to 39·9% of the make. The cost of manufacture for 1932, including interest, sinking fund, and renewal charges, was $1.7868 against $1.8831 for 1931, a decrease of $0.0963.

The amount of gas used for public lighting was 146,858,043 c.ft., equal to 48·9% of the output. During the year 60 new lamps were erected and 1 was cut off. The total number of lamps on the district is 3753, of which 489 are fitted with clock controllers for automatic lighting. The amount of gas sold to private consumers was 131,485,509 c.ft., against 147,394,137 c.ft. during 1931, a decrease of 10·79%.

The unaccounted-for gas was equal to 5·3% of the make, against 6·6% for 1931.

The gross profit made by the Department, allowing for public lighting at cost, was $268,823.07, and after deducting interest on loan, sinking fund, and renewal charges, there was a net profit of $89,227.33 of which $16,831.57 was expended on additions of a capital nature to mains, &c., leaving a credit balance of $72,395.76.

THE "JOURNAL" TECHNICAL RECORD

Which contains Reports of Meetings of Gas and Allied Associations

What is Wrong with the Gas Industry?*

By D. A. PRATT, of York.

With more than a century of public service behind it, a wonderful record of constant achievement, despite numerous rebuffs from the Government and certain municipalities, do we not feel it an honour to belong to the Gas Industry? Ought we not to feel that any injury or injustice done to this great Industry is done to us personally, and do our utmost in its defence?

It is natural to be proud of our connection with an Industry which, despite the unexampled period of trade depression in the country, has continued to expand. Also, it is an Industry British from top to bottom; practically everything used in connection with the production of gas, and the allied trades, being produced in the British Isles. We are proud too of the fact that we are singularly free from labour trouble; in fact, the relationship between the employers and employees in the Industry is of an exceedingly cordial nature.

The Gas Industry is one of the country's greatest assets, providing regular employment for over 113,000 gas employees, while the invested capital is round about £212,000,000. The value of the Gas Industry to the coal trade must be emphasized, seeing the amount of coal carbonized is some 18,000,000 tons per annum, giving constant employment to about 67,000 mine workers. Indirectly the production of gas provides work for many thousands in the allied trades—tar, pitch, benzole, dyes, and the various chemical industries, together with that of meters, stoves, various appliances and fittings, paint and oil, &c., and the engineering trade in plant construction, including iron and steel rolling mills. The estimated employment thus provided is well over 500,000 workers.

We point proudly to the fact that our gas undertakings supply gas to 10,000,000 consumers, and over 3000 trades are commercial users of gas.

Surely the Gas Industry is deserving of the wholehearted support of the general public, as well as the Government, and municipalities who reap a rich harvest in the form of rates and taxes. Judge then my amazement some time ago when I read in the Press that the Chairman of the Swansea Corporation Electricity Committee declared that "gas has got to be stamped out and steam made obsolete." It would be charitable to assume that Councillor T. James, of Swansea, who is reported to have made this statement, did not know what he was talking about, as with all his enthusiasm for electricity he could hardly contemplate such a calamity as would inevitably follow if his expressed desire was carried into effect. The financial crash and widespread unemployment and ruin would be too terrible to contemplate. I observe, though, that he was speaking at the Annual Dinner of the West Wales Section of the Electrical Power Engineers Association, and having attended many similar functions I am willing to make certain allowances for the occasion.

Another instance of hostility from an unexpected quarter came from an Electricity Commissioners Inspector, a Mr. Nimmo. Those of you who have had experience of Government inquiries will be aware that, as becomes Government Officials, the Inspectors adopt an impartial and judicial attitude in regard to their inquiries; but this Mr. Nimmo was apparently an exception, being one of those "electrically minded" individuals. When conducting an inquiry at Tredegar, whose Urban District Council wished to borrow money to carry out an electricity scheme, he is reputed to have said that "however much the Gas Manager or the Council muzzles electricity the people in general are becoming electrically minded, and they do not want gas for lighting purposes." Evidently Mr. Nimmo regards electrical enthusiasts as the "people in general." Coming from a Government Inspector such an outburst was most unseemly, and I only hope that it has been reported to the right quarter.

These two instances from South Wales are indicative of what the Gas Industry is up against, and we should no longer take attacks of this nature lying down.

COMPETITION.

Competition is good for all of us, ensuring the best and most economical service to the community, and it has made us realize that we have got to "get on or get out." While we welcome competition we have the right to insist that it shall be fair and within the bounds of business decency. Surely every industry should stand on its own feet without the aid of public money to bolster it up.

The Gas Industry has never needed or desired such a stimulant. All it asks, and surely has the right to expect, is to be permitted to trade and offer service to the public on an equal footing with other forms of light, heat, and power. Our electrical competitors, however, are becoming so unfair in their methods that I am in full sympathy with a friend of mine who said he had become a convert to the Americanized version of an old proverb—"Do unto others as they do unto you, but do it first."

Mr. D. A. PRATT.

Competition will undoubtedly be keener every year, and if we are to hold our own in the fight the whole of our resources must be thrown into the conflict. Whatever our position in the Industry individually, our interests are mutual—"We're a' Jock Tamson's Bairns." We know what we have to contend with, and neither complaining nor repining will gain a single new consumer. We must work out our own salvation.

Our competitors possess two great virtues—enthusiasm and determination—and these are strongly developed.

Being shackled at present by out-of-date legislation, having the resources of the Government against us, and boycotted by a number of municipalities owning electricity stations, we have been fighting an uphill battle; but the time has arrived to show the fighting spirit and to contest every inch of the way for business, believing in the superiority of our product. It means in effect the whole of our man power and brain power being utilized in constant

* A paper read before the Wales and Monmouthshire Association of Gas Engineers and Managers, Sept. 21.

endeavour, enthusiasm, and energy, from the chairman of the directors and gas committees down to the humblest worker in our employ.

Are We Gas Conscious?

Are we all imbued with the will to win in the struggle which will be continuous and without respite as time goes on? To those of you in charge of gas undertakings, may I put these questions:

Are your chairmen and directors or committees gas conscious and enthusiastic for the progress of your undertaking, and do they give you whole-hearted support? Are they themselves users of gas for light and heat, or are they advertising electricity by its use? How embarrassing to be told "Why even your own directors use electricity." To advocate the use of gas and then join the enemy as a consumer is inconsistent and unfair to the undertaking they are elected to serve. There is no room in the Gas Industry for "Mr. Facing-both-ways."

Have you ever heard of an electricity chairman of directors or committee using gas in his own home or business? I never have.

Do your directors or committees give their unstinted support to your efforts in securing new consumers?

When you require new plant and appliances to enable you to extend your area and increase your output, do they endorse, or do they say "Wait and see the effect of the electricity efforts?"

Have you ever heard of electrical undertakings waiting to see the results of the gas push in any district?

You are now in competition for all time. Are your directors or committees and staff as fully determined and enthusiastic as those of your electrical competitors?

Do you receive encouragement and help from the boardroom and committee room, or are your efforts negatived by people suffering from inertia with no outlook beyond the immediate present? Do you sometimes feel like the parson who said that his parishioners at times nearly drove him to distraction and on one occasion he nearly said "Damn?"

I have been told that certain directors have no thought beyond fees and dividends, that there are members of gas committees without interest in their undertakings, merely being found a place on the Committee for no other reason than filling vacancies. Any suggestion of spending money on improvements, even when proved advantageous, is opposed by them with regularity.

Certain members of gas committees are known to have expressed the view that increased electrical competition was a blessing, in that it might put back the necessity for spending money on plant and appliances in their gas-works, which were really required. Others there are who are waiting for amalgamation in the sweet by and by. For such people any excuse for doing nothing is considered good enough.

Can any business flourish if those elected to control it are allowed to continue to put the brake on progress? A corporation gas manager suggested that a certain member of his committee would be a great asset to the Ways and Means Committee because he knew no man with more ways of being mean than Councillor So-and-so. There is no such thing as standing still; you are either going forward or going backward.

"While there's life there's hope," it is said, but there is no cure for senile decay. The movement downhill is hard to arrest and gets harder still the further the descent. There is no room in the Gas Industry for the half-hearted. They should get out and make way for men who are prepared to move with the times.

"Economy" or Wise Spending?

Recently the word "Economy" was in everybody's mouth. The Government made appeals to municipalities to curtail expenditure; the business community and general public followed suit, believing it to be in the national interest, and in many cases, be it said, an excuse for being tight-fisted. It became a vicious circle reminding me of a French allegory that points a moral worth remembering:

A portrait painter sat in his favourite café sipping wine. His first small bottle finished, he was about to order another when his eye fell on a headline in the *Figaro*—"Hard Times Coming"—so instead of ordering a second bottle he called for his check.

"Is there anything wrong with the wine?" asked the landlord.

"The wine is good, but I did not order a second bottle because hard times are coming and we must economize," explained the artist.

"Hard times?" said the landlord, "then my wife must not order the silk dress we planned."

"Hard times?" repeated the dressmaker when the order was cancelled. "This is no time to expand. I must not make the improvements I had planned in this place."

"Hard times, eh?" said the builder when the costumier cancelled the building plans. "Then I cannot have my wife's portrait painted," so he wrote to the artist and cancelled the portrait order.

After receiving the letter the artist went again to his favourite café and ordered a small bottle of wine to soothe him. On a nearby chair was the paper in which he had read of hard times a few days before. He picked it up, scanned more closely, and found that it was two years old.

How foolish it all seems now. The word "economy" was misconstrued, and having seen the havoc caused by misguided zeal for curtailment of expenditure, resulting in widespread unemployment, a new and wiser motto has been adopted—"Spend to mend."

We must never lose sight of the fact that the first essential business of a gas undertaking is to sell gas; nevertheless it is false economy to refuse to replace out-of-date and obsolete plant and appliances. It is sound business economy to keep up to date in design and size of plant to extend the sales of gas.

Don't Make Trade Depression Worse.

I was recently informed that as there was so much depression in trade generally the time was not opportune to go ahead with a push for increased business. What a doleful outlook! That should be the time to make every effort to secure a fair share of what trade there is available. The buyer does not need to search far or long for a seller these days. I agree that trade might be better and that South Wales and Monmouthshire have suffered and are still suffering acutely; but all businesses feel the effect of trade decline, including, of course, the electrical industry, and our aim must be not only to retain what business we have got, but to carry the fight into the enemy's camp and go out for increased customers. There is no need for despondency. A gas manager informed me a few weeks ago that he had recently obtained 170 consumers who had returned from electricity to gas for lighting. Be on the look-out for the re-bound, and take advantage when it comes to make it permanent. Let our motto be "What we have we hold. What we haven't we're after."

Trade is undoubtedly improving. My own firm has not been so busy upon gasholder and plant construction for years past, as is the case to-day. Be prepared to push gas into the houses of new consumers, and go out for business against our electrical friends, and let them see that we do not intend to lose anything without a great effort being made.

Can Gas be Made Fashionable?

The public cannot be blamed if they form the impression that it is fashionable to have electricity. Politicians of all parties advocate it; the Government gives it much publicity and actively helps it along, and, as the taxpayer is also brought in to assist, is it surprising if they accept it as something which is up to date? Show them good gas lighting, which we know is superior to electricity and equally as convenient with modern switches; the latest fittings; stoves and gas fires; and, above all, endeavour to convince them that gas is THE THING and that it is fashionable to use gas. Gas fires, stoves, and lighting fittings are made in most attractive designs and colours that readily appeal to people of refined taste if brought to their notice.

Nowadays the public are not merely enamoured of cheapness. If it can be shown that gas is fashionable it would have a greater appeal. If it is possible to get architects, builders, and local authorities to regard gas as fashionable, the public will demand gas with greater insistence.

Women and the Gas Industry.

Our competitors no doubt scored over us when they formed an Electrical Association for Women. Realizing the enormous advantage of obtaining the women's support the whole of the electrical industry, including the appliance makers, have spared neither time nor expense to make the Women's Association a success. Branches are being formed in various parts of the country, and their object is, of course, the increased sale of electricity and electrical appliances.

The electrical people have followed our lead many times previously, so that, without loss of dignity, can we not follow suit with a Women's Gas Association? I think it is well worth while, and a sure way to make gas fashionable. It requires a strong national effort in conjunction with district associations, and I am sure there are plenty of willing helpers. Here is scope for building-up good business. Can we afford to ignore it?

It might be worth while to utilize the service of women as canvassers and demonstrators to a greater extent than

at present, because, after all, it is the woman's job in the home.

The Showroom.

Now, in this connection, I would ask what means have you of attracting your women customers? Nowadays it is not to be expected that they will visit the gas-works yard and place an order for a stove or gas fire without knowing exactly what they are ordering. It is therefore most essential to have in the shopping centre an attractive showroom with occasional changing of the window display. Even a small gas undertaking must find a showroom a paying proposition, and if not extensive the showrooms can be well laid out and designed to draw attention. Also it is desirable to mark the prices and hire-purchase terms in plain figures.

Women, as we all know, are regularly out shopping, sometimes without any preconceived idea of what they intend to purchase, but if something particularly attracts them they will often buy. Ask yourself the question, Why do people stop at certain shops and look at their displays? Because they attract.

Have you ever thought of having a sale of gas fittings and appliances, when all goods are reduced in price? A Gas Company in the North of England found it a very profitable venture, not only in the sale of fittings, but (what is more important) in increasing the gas consumption. Another gas manager hit upon the somewhat novel idea of taking a stall in the public market each week and displaying fittings and appliances, which is providing an excellent means of increasing business. A gas salesman informed me some time ago that there are no " wanted " gas appliances; they have to be brought to the notice of the customer. He sold many hot water heaters to people who, until they saw them, were quite satisfied with the fire back boiler to the usual coal grate. There is still considerable room for improvement in sales methods and plenty of scope for originality.

Amalgamation.

From time to time there have been amalgamations between nearby undertakings, generally to the advantage of the public whom they serve, though, as is well known, there have been exceptions. Recently there has been a more insistent plea for other undertakings to get together in the form of Regional Gas Grids, absorption of small undertakings by larger neighbours, or a system of co-ordination. Whether the Industry would benefit or not in the long run, of course, depends upon circumstances and the terms of agreement, but it is not always the larger undertakings which can show the best results. I have in mind several quite small undertakings below 100 million per annum whose results are superior to large neighbouring works, as can be readily seen by a glance through published statistics.

I am not against amalgamation where it can be proved beneficial, but there are amalgamated undertakings to-day overburdened with capital, and the consumers have not as yet enjoyed reduced charges.

Amalgamations may be generally advantageous, but they will not solve all our problems, and it behoves us all, whether our works are large or small, to face up to the position as it is and continue to work vigorously. Don't sit by and wait for amalgamation, which may possibly never materialize or it may be a long time ahead. I know two undertakings within easy walking distance of one another who have been talking about amalgamation for the past thirty years, and to-day are as far off as ever.

Municipal Short-Sightedness.

Short-sightedness on the part of municipalities is nothing new, but I must confess to considerable surprise to have learnt recently of certain town councils, owning their own gas undertaking, who pay large sums of money to outside electrical concerns for lighting, for public halls, council offices, and even for lighting the streets. Can anything be more absurd than for a public body to injure its own undertaking, and stabilize that of its competitor at the expense of the ratepayers? I cannot find words strong enough to express my opinion of such municipal pigheadedness.

I am referring not only in a general way, but to certain towns in Wales.

In their enthusiasm for electricity certain municipalities owning electricity undertakings are prepared to go to any lengths in their attack upon gas companies.

In numerous instances the interests of the ratepayers are ignored, and many thousands of pounds have been unnecessarily thrown away upon street lighting. Although admittedly the most efficient and economical illuminant, gas has sometimes been displaced at great cost to the ratepayers for no other reason than the municipality being the suppliers of electricity.

Unfortunately the ratepayers have no redress beyond the power to depose those who waste their money. Recently the York Corporation took away 770 lamps from the Gas Company, and the ratepayers are left to lament the waste of about £10,000 and to console themselves with inferior electric lighting. As is often the case the Council took refuge by going into committee to discuss and vote upon it. Many similar instances can be proved of municipal extravagance. It behoves those companies treated so unjustly to retain a lively recollection and make an extra effort to make up for the loss by going out against their competitors keenly for other business.

The Importance of the Lighting Business.

It seems strange that, as gas was originally instituted for lighting, it is now regarded by some people as the least important side of the gas business. I still maintain, however, that it is most essential to retain the lighting load if at all possible.

The gas interests in America gave up most of the lighting, and, as Mr. Clifford E. Paige said two years ago, " to their everlasting regret." Gas lighting is our birthright and is still far superior for house and street lighting with modern fittings and mantles. Keep it all if you can, or as much as you can, because it is the first point of attack and the thin end of the wedge. Strain every nerve to hold the lighting, and you can keep your competitor out of the houses who retain it. With the new gas switches the convenience of electric light is no longer an argument in its favour.

Good street lighting is a sound form of advertisement, but regular attention is needed to ensure it. Do not wait for the threat of displacement before making improvements if necessary. Street lighting has been lost by such neglect, and once lost it is hard indeed to get it back.

New Uses for Gas.

When it is explained that 3000 trades are regularly using gas, one is apt to conclude that we must surely be approaching saturation point, but it is quite evident that there are limitless possibilities yet before us for the use of gas.

For some time I have been interested in the possibility of extending the supply of gas to outlying districts where it would be unprofitable to lay mains, and it was first suggested to me by a gas manager friend who had been thinking over the possibility of increasing his customers by this means, there being a number of well-to-do residents who would have been willing to take a supply of gas.

In America bottled gas is used extensively, as it has been found to be little more expensive than coal which has to be delivered from a distance. Arrangements are made for the delivery of two, three, or more cylinders; and when one's supply is running out fresh cylinders are ordered, promptly delivered by lorry, and the empties removed, ensuring a constant gas service.

In our own district the London and North-Eastern Railway Company, having closed down a small gas-making plant, now delivers cylinders of gas from York to fill the district supply holder periodically.

It is interesting to learn that the Belfast Corporation Gas Department has arranged to supply the Great Northern Railway of Ireland with compressed gas for cooking on restaurant trains, and this is expected to develop. There seems to be immense possibilities in this direction, and whether it will pay to install the necessary plant for compressing the gas will necessitate very careful consideration. At any rate, this seems to open an avenue for gas service well worth investigation over here.

Gas-Driven Motor Vehicles.

Another important innovation is being watched with considerable interest, and that is the utilization of gas for motor vehicles, such as are at present in use at Birmingham, London, and several other towns; and no doubt many present, when attending the British Industries Fair, saw the double-decker 'bus running in Birmingham.

For a large vehicle the gas is compressed up to 5000 lbs. per sq. in. into storage bottles of " Vibrex " steel, and the 20 h.p. Austin vans have a working pressure of 3000 lbs. per sq. in. At Birmingham they have been experimenting with a 32-seater single-decker 'bus, and it seems to be an assured success.

We look forward to the more general use of British gas for motor vehicles in place of imported petrol.

The Future.

Taken on the whole, despite all setbacks, I am convinced the Gas Industry is stronger to-day than ever before, more virile, and able to offer greater service to the community. It has been far too modest in the past, and being now in the business market should advertise to a far greater extent than is the case to-day. You must shout loudly to be heard to-day.

There have been enormous improvements even during the

past ten years in methods of manufacture and distribution of gas, and the advancement in all gas plant construction is simply amazing when I look back over a period of years.

Further improvements will continue until our present methods will in turn be out of date, even as those who built up the Industry so worthily in the past have been improved upon. It behoves us and our successors to keep up with the times, always responsive to the public we serve. Ours is a great heritage, and although we can be proud of wonderful past achievements I believe we can look forward to a great and prosperous future.

Therefore, let us conform to that old motto—"Think as though success were certain. Work as though it were not."

Discussion.

The PRESIDENT (Mr. I. G. Jenkins, Abertillery) said they had listened to a most interesting paper, delivered in the true Yorkshire style. Personally he was most interested in the references Mr. Pratt had made to the hostility shown to the Gas Industry, and he was particularly concerned about the Tredegar case. Gas was sold at a very cheap price, and the undertaking was very well managed, but it was evident that the Electricity Commissioners intended to push the matter as much as they could. Many of the local people seemed to forget that in Tredegar the whole of the coal carbonized was produced in the town itself, but it was probable that electricity used there would be produced by generators outside the Council's area. The Gas Industry had been working under a very unfair handicap; but they were still holding their own, and in many cases increasing their output. There was still a big field in front of them. The paper should invoke a very good discussion.

Mr. MORGAN MORGAN (Bridgend) said that on behalf of his colleague, Mr. Collin, he wished to congratulate Mr. Pratt on his paper. It was at the instance of Mr. Collin and himself that Mr. Pratt had come forward.

Mr. W. CLARK JACKSON (Neath) said Mr. Pratt, referring to the competition they had to meet, had stated that this had made them realize that they had got to "get on or get out." That was where the younger men, with all their energy, had the pull over the older men. With regard to the Tredegar case, he did not think the last had been heard of it. He understood that the National Gas Council had made representations in the matter. As one of the older members of the Association he thought that some of the younger ones ought to rise and take part in the discussion on a paper which was so full of interesting points in regard to the future of the Industry.

Mr. E. H. CLARRY (Cardiff) urged the need for greater advertising. He thought people ought to know, and wanted to know, what the Gas Industry was doing internally. He had frequently been asked questions in regard to bottled gas, and the possibilities of it—the feasibility of equipping a lorry with gas in bottles and taking in a large supply of it. He thought there was also a big opening for bottled gas for motor cruisers. With regard to competition on the part of the electrical industry, he instanced floodlighting. With bottled gas, they could have portable lighting, and by this means put up a good show anywhere. It would be a good public advertisement, and it was public advertising that was wanted.

Mr. A. C. HOVEY, ex-President of the North of England Gas Managers' Association, said that Mr. Pratt seemed to have applied the spur very seriously on a slow-moving horse. During the last week or so he had been staying in the northern part of the Principality in a house in which he had been interested for many years. It had been an all-gas house for nearly twenty years, and he thought of installing a system of central heating. He wrote the Gas Engineer asking him if he could induce his Committee to introduce a special rate for that purpose. The Committee suggested a reduction from 3s. 6d. to 2s. 6d., and this was confirmed by the Council only a few days later. That was an example of expeditious handling which they liked to see; and he would suggest that if any engineer experienced any difficulty in such a matter with his Committee he should invite Mr. Pratt to come and stay with him a night or two, and invite the Committee to meet him. [Laughter.] They were now developing gas utilization in many directions. They were up to 85% efficiency in manufacture, and over that in gas application.

Mr. J. MOGFORD said it had been said that "outsiders see more of the game." A Rugby forward knew that quite a lot of things happened in the scrum that outsiders did not see at all. As an answer to Mr. Pratt's question, he thought their main trouble was the competition of electricity. That industry was being nationalized. They of the Gas Industry had got to stand up and fight against a national scheme backed up by Westminster.

Mr. E. ABLETT (Swansea) said that while he did not intend to criticize, he would call the Author's attention to one point. Mr. Pratt had stated that he had never heard of gas appliances being found in the home of the Chairman of an Electricity Committee. They in Swansea had fixed quite a number, not only in the homes of officials of the Electricity Department, but also in the homes of electrical engineers themselves. Mr. Pratt had spoken of the necessity of making gas fashionable. That was a very important point. One direction in which he wished this could be done was by some "gadget" whereby wireless apparatus could be gas operated. A tremendous amount of business was being done by the electricity people in fitting all-main sets. Mr. Pratt had spoken of the necessity of fighting. It was true that they must fight, but they must have arms to fight with. Despite all their efforts towards freedom during recent years, they were disheartened with results. They were still burdened with restrictions and regulations. Price was the decisive factor.

Mr. J. H. CANNING (Newport), in proposing a vote of thanks to Mr. Pratt, said he was very pleased to have had the opportunity of listening to such a breezy and stimulating paper, and he thought every word Mr. Pratt had said had been useful to every one of them. They who were inside the Industry could take to heart what he had said. With regard to the speech of the Electricity Chairman referred to, he thought they could dismiss the remarks of that gentleman who, with all due respect, did not know his subject. The Tredegar case was much more serious. People who acted in a judicial capacity had no right to make *ex parte* statements. Secondly, the gentleman concerned had no right to attempt to lay down to a Local Authority the method of conducting its work, and he certainly had no right to cast reflections upon a gentleman whom they all honoured as a Past-President of that Association. Personally, he felt very strongly about it, and he thought that to take such a thing lying down would be to invite frequent repetition of the same sort of thing. He was very glad to hear from Mr. Clark Jackson that representations were being made in the proper quarters in regard to this matter.

Mr. H. D. MADDEN (Cardiff), in seconding the vote of thanks, confessed that he might have said a great deal upon a subject which was very near to his heart—Salesmanship and Service—but as he had to read a paper at the forthcoming Annual Meeting of the British Commercial Association he would not reiterate his views.

Mr. PRATT, in reply, said he was delighted to do anything he could for the Gas Industry, and he would go anywhere if his services could be of use in pushing forward gas sales. He had had eight gas switches in his house for two years. These worked perfectly, and by them he was able to dim the lights, which one could not do with the electrical fitment. He was not against amalgamation where it could be proved beneficial, but in many cases it had not been so. Neither did he infer that managers of small works were duds; he knew of some who were absolute geniuses.

Colonial Gas Association, Ltd.

Advice has been received by cable from the Head Office, in Melbourne, respecting the operations of the Colonial Gas Association during the year ended June 30, 1933.

The Directors' report states: After providing for depreciation, &c., the balance at credit of revenue account is £111,060. Adding the balance brought forward from last year—viz., £22,698, and deducting bank, loan, and debenture interest, and after payment of interim dividend of 4% and 3% for the half-year ended Dec. 31, 1932, paid in April last on the preference and ordinary shares respectively, the amount at credit of the net revenue account is £54,183.

The Directors recommend as follows:

(*a*) That a dividend at the rate of 8% per annum (less interim dividend of 4% for the half-year ended Dec. 31, 1932) be paid on the preference shares; and

(*b*) That a dividend at the rate of 6% per annum (less interim dividend of 3% for the half-year ended Dec. 31, 1932) be paid on the ordinary shares; and

(*c*) That the balance, approximately £23,600, be carried forward to the next account.

Income-tax is charged in the revenue account this year instead of making appropriations from profits.

The sales of gas for the Association's works show an increase of 2·8% on the sales for the preceding year, while the sales of gas for the subsidiary companies show a decrease of 3·2%.

An exchange suspense account has been opened for £6020, representing provision for the possibility of dividends to preference shareholders on the London Register being held to be payable in sterling.

The report further mentions that a Company was registered in Queensland on Jan. 31, 1933, styled "Dry-Ice (Queensland) Proprietary, Ltd." This Company in which the Association hold a large share interest is formed for the purpose of erecting plant for the manufacture of solid and liquid carbon dioxide on the Association's land.

GAS MARKETS & MANUFACTURES

Stock Market Report.

[For Stock and Share List, see later page.]

On the resumption of business last week markets were quiet, and a lack of support led to easier prices. Later the position was further aggravated by the uncertainty of events abroad, particularly the situation in America, and prices gave way still further in the absence of buyers. An exception to the general rule was the firmness of British Funds, which were again well supported. Towards the close, however, a more hopeful outlook prevailed to which markets made an effort to respond, though the movement came too late to offset the effects of the previous dull conditions. Treasury Bills were allotted at the new low record rate of 4s. 9·15d.%.

Gas stocks and shares were again in good demand, and, with the exception of the stocks of two companies operating abroad, a number of ordinary issues made further substantial advances. Wandsworth gained 6 points to 153½, and at this price the yield on the basis of a 7% dividend works out at £4 11s. 2d.%; South Metropolitan rose 2 points to 130½, and the yield in this case is a trifle higher at £4 11s. 10d. on a 6% dividend. Barnet 7% advanced a further 5 points to 167½, and Hong Kong and China £1 shares another 1s. to 32s. The two falls referred to above occurred in Imperial Continental, with a drop of 13 points to 215, and Montevideo, which eased 2 to 58.

An interesting announcement last week was that of the first dividend distribution by the South-Eastern Gas Corporation, the Directors of which have declared an interim dividend of 3% on the ordinary shares—payable Oct. 10. The Directors of the Bombay Gas Company have declared an interim dividend of 3½% (unchanged), payable Nov. 1.

Current Sales of Gas Products.

The London Market for Tar Products.

LONDON, *Sept.* 25.

There are no changes to report in the prices of tar products, which remain as follows:

Pitch, 80s. per ton f.o.b.
Creosote, 3d. per gallon.
Refined tar, 4d. to 4¼d. per gallon in bulk at makers' works.
Pure toluole is about 2s. 9d.; pure benzole, 1s. 9d.; solvent naphtha, 95/160, is steady at 1s. 7d. to 1s. 8d.; and 90/140 pyridine bases, 4s. 3d. to 4s. 6d.—all per gallon naked at makers' works.

Tar Products in the Provinces.

Sept. 25.

The average prices of gas-works products during the week were: Gas-works tar, 30s. to 35s. Pitch—East Coast, 72s. 6d. to 73s. f.o.b. West Coast—Manchester, Liverpool, Clyde, 72s. 6d. to 75s.* Toluole, naked, North, 1s. 10d. to 2s. Coal-tar crude naphtha, in bulk, North, 6d. to 6¼d. Solvent naphtha, naked, North, 1s. 6d. to 1s. 6¼d. Heavy naphtha, North, 10d. to 11d. Creosote, *ex* works, in bulk, North, liquid and salty, 2d. to 2½d.; low gravity, 2d.; Scotland, 2d. to 2½d. Heavy oils, in bulk, North, 4d. to 4½d. Carbolic acid, 60's, 2s. 7d. to 2s. 8d. Naphthalene, £9 to £10. Salts, 55s. to 75s., bags included. Anthracene, "A" quality, 2½d. per minimum 40%, purely nominal; "B" quality, unsalable.

* All prices for pitch are now quoted on the basis of f.o.b. In order to arrive at the f.a.s. value at any port it will be necessary to deduct the loading costs and the tolls whatever they may be.

Tar Products in Scotland.

GLASGOW, *Sept.* 23.

There is little change to record in tar products during the week. On the whole quotations are well maintained with prompt supplies not too plentiful.

Crude gas-works tar.—The actual value is 40s. to 45s. per ton *ex* works.

Pitch.—Business is slow and value is more or less nominal at round 70s. per ton f.o.b. Glasgow. For home trade 70s. to 72s. 6d. per ton *ex* works is quoted.

Refined tar to Ministry of Transport Specification is in small request at 3¼d. per gallon f.o.r. in bulk.

Creosote oil.—Prompt supplies of some grades are difficult to secure, and prices are firm. B.E.S.A. Specification is 3d. to 3¼d. per gallon; low gravity, 3d. to 3¼d. per gallon; and neutral oil, 3d. to 3¼d. per gallon—all in bulk *ex* works.

Cresylic acid is still quite steady, although demand is not yet normal. Pale, 97/99%, is 11d. to 1s. per gallon; dark, 97/99%, 9d. to 10d. per gallon; and pale, 99/100%, 1s. 2½d. to 1s. 3½d. per gallon—all f.o.r. in buyers' packages.

Crude naphtha is valued at 4¼d. to 4¾d. per gallon *ex* works in bulk, according to quality and quantity.

Solvent naphtha.—90/160 grade is 1s. 4d. per gallon, and 90/190 heavy is 1s. per gallon.

Motor benzole.—Production is small, and price is 1s. 5d. per gallon *ex* works.

Pyridines.—90/160 grade is 3s. 3d. to 3s. 6d. per gallon, and 90/140 grade 3s. 6d. to 3s. 9d. per gallon.

Benzole Prices.

These are considered to be the market prices for benzole at the present time:

	s. d.		s. d.	
Crude benzole	0 9	to	0 9½	per gallon at works
Motor ,,	1 4	,,	1 4½	,, ,, ,,
Pure ,,	1 7½	,,	1 8	,, ,, ,,

Gas Companies' Results.

Alliance and Dublin.

The accounts of the Alliance and Dublin Consumers' Gas Company for the half-year ended June 30 last show a profit on the revenue account of £71,785, and, after providing for interest on debenture stock, interest on temporary loans, and income-tax, there remains the sum of £54,635, to which must be added the sum of £28,865, being the balance brought from the last account, making a total of £83,501. The Directors recommend the declaration of a dividend at the rate of 7% per annum, less income-tax, on the consolidated ordinary stock of the Company. This will absorb the sum of £54,315, after which a balance of £29,185 will remain to be carried to the next account.

Tamworth.

The report of the Tamworth Gaslight and Coke Company for the year ended June 30, 1933, shows that the profit for the year amounts to £3752 and the Directors have recommended a dividend of 10% per annum on the old shares for the half-year, and 7% per annum on the new shares, similar dividends having been paid for the half-year ended March, 1933. The Chairman (Mr. J. T. Hill) said successful tests had been made with local coal for the carbonization of gas, and they hoped in the present year to use a considerable portion of local fuel which should tend to decrease unemployment.

Corporation Undertakings' Results.

Airdrie.

During the past year the amount of gas made was 142,361,000 c.ft., as against 142,774,000 c.ft. last year, a decrease of 413,000 c.ft., or 0·29%. The coal carbonized amounted to 7737 tons, as compared with 8052 tons, a decrease of 315 tons on the previous year. There was also used in the manufacture of carburetted water gas 14,734 gallons of oil, compared with 6537 gallons during the previous year, an increase of 8197 gallons. The yield of gas per ton of coal carbonized, including carburetted water gas from coke and oil, was 18,400 c.ft., as compared with 17,731 c.ft. during the previous year, an increase of 669 c.ft. The total quantity sold was 133,797,500 c.ft., compared with 134,362,700 c.ft. for the preceding year, a decrease of 565,200 c.ft., or 0·42%. The continued depression in the area of supply was responsible for a further slight decrease of consumption with ordinary and prepayment meters, while industrial meters showed a consumption of 6,772,900 c.ft., compared with 7,006,800 c.ft. last year, a decrease of 233,900 c.ft., or 3·33%. The total income of the Undertaking amounted to £33,621, as against £34,202 for the previous year, being a decrease of £581.

STOCK AND SHARE LIST.

Official Quotations on the London and Provincial Stock Exchanges.

Issue. £	Share.	When ex-Dividend.	Dividends. Prev. Hf.-Yr. % p.a.	Dividends. Last Hf.-Yr. % p.a.	NAME.	Quotations Sept. 22.	Rise or Fall on Week.	Transactions Lowest and Highest Prices During the Week.
1,551,868	Stk.	Apl. 3	7⅞	7	Alliance & Dublin Ord. ...	122–132	+2	...
374,000	..	July 10	4	4	Do. 4 p.c. Deb. ...	85–95	...	...
557,655	..	Aug. 28	7	7	Barnet Ord. 7 p.c.	165–170	+5	169
300,000	1	May 8	1/4⅛	1/9⅛	Bombay, Ltd.	25/–27/-	...	26/-
178,280	Stk.	Aug. 14	9½	9½	Bournemouth sliding scale	192–202	...	...
550,050	..	..	7	7	Do. 7 p.c. max. ...	163–168	...	166
439,160	..	..	6	6	Do. 6 p.c. Pref. ...	135–140	...	...
50,000	..	June 26	3	3	Do. 3 p.c. Deb. ...	74–79	...	..
162,025	..	..	4	4	Do. 4 p.c. Deb. ...	99–104	...	...
210,000	..	..	5	5	Do. 5 p.c. Deb. ...	120–125	...	...
357,900	..	Aug. 28	7½	7½	Brighton, &c. 6 p.c. Con. ...	157–167	...	..
540,000	..	..	6⅔	6⅔	Do. 5 p.c. Con. ...	143–148	...	147–148
195,500	..	..	6	6	Do. 6 p.c. B Pref.	134–139	...	136–138½
1,487,500	..	July 24	5	5	Bristol 5 p.c. max.	111–112*a*	...	..
120,420	..	June 26	4	4	Do. 1st 4 p.c. Deb. ...	99–101*a*	...	...
217,870	..	..	4	4	Do. 2nd 4 p.c. Deb. ...	99–100*a*	...	...
328,790	..	..	5	5	Do. 5 p.c. Deb.	119–122*a*	...	...
855,000	..	Apl. 3	7	8	British Ord.	157–162	...	157–160
100,000	..	June 26	7	7	Do. 7 p.c. Pref.	145–150	...	...
350,000	..	..	5½	5½	Do. 5½ p.c. Pref. ...	108–113	...	...
120,000	..	..	4	4	Do. 4 p.c. Red. Deb. ...	94–99	...	...
450,000	..	..	5	6	Do. 5 p.c. Red. Deb. ...	103–113	...	...
160,000	..	June 26	5	5	Cambridge 5 p.c. Deb. ...	115–120	...	...
100,000	10	May 22	6	4	Cape Town, Ltd.	7–8	...	7½
100,000	10	Apl. 24	4½	4½	Do. 4½ p.c. Pref. ...	7–8	...	...
150,000	Stk.	June 26	4½	4½	Do. 4½ p.c. Deb. ...	93–98	...	95½
626,860	..	July 24	6	6	Cardiff Con. Ord.	117–122	...	...
237,860	..	June 26	5	5	Do. 5 p.c. Red. Deb.	105–110	...	...
157,150	..	Aug. 14	6½	5	Chester 5 p.c. Ord.	105–110½	...	...
98,936	1	May 22	2/-	2/-	Colombo, Ltd. Ord.... ...	1¼–1⅝	...	...
24,500	1	..	1/4⅛	1/4⅛	Do. 7 p.c. Pref. ...	18/6–20/6	...	...
609,204	1	Mar. 20	/11 48	/11 48	Colonial Gas Assn. Ltd. Ord.	17/6–20/-	...	...
296,053	1	..	1/3 30	1/3 30	Do. 8 p.c. Pref.	1⅛–1½	...	...
1,796,955	Stk.	July 24	6½	5	Commercial Ord.	115–120	...	...
475,000	..	June 12	3	3	Do. 3 p.c. Deb. ...	73–78	...	...
265,272	..	Mar. 6	—	5	Do. 5 p.c. Deb. ...	120–125	...	120
807,560	..	Aug. 14	7	7	Croydon sliding scale ...	145–150	+2	145½–149½
469,590	..	..	5	5	Do. max. div.	103–108	...	105
500,000	..	July 10	5	5	Do. 5 p.c. Deb.	120–125	...	...
542,270	..	Mar. 6	7	10	Derby Con.	155–165*c*	...	...
55,000	..	July 10	4	4	Do. 4 p.c. Deb. ...	93–98*c*	...	...
209,000	..	Aug. 28	5	5	East Hull Ord. 5 p.c. ...	105–110	...	...
179,500	..	Aug. 28	6	6	East Surrey Ord. 5 p.c. ...	126–131	+1	126–130
155,019	..	June 26	5	5	Do. 5 p.c. Deb. ...	117–122	...	...
1,002,180	..	Apl. 3	15	17	European, Ltd.	143–148	+1	145–146
19,373,392	..	Aug. 14	5⅝	5⅝	Gas Light & Coke 4 p.c. Ord.	26/3–27/3*f*	..	26/9–27/1½
2,600,000	..	..	3½	3½	Do. 3½ p.c. max. ...	83–86	...	...
4,477,106	..	..	4	4	Do. 4 p.c. Con. Pref. ...	100–103	..	101½–103
6,102,497	..	June 12	3	3	Do. 3 p.c. Con. Deb. ...	78–81	+1	80–81
3,642,770	..	..	5	5	Do. 5 p.c. Red. Deb. ...	115–118	...	...
3,500,000	..	..	4½	4½	Do. 4½ p.c. Red. Deb. ...	113–116	...	113½–114½
270,466	..	Aug. 28	6	6	Harrogate New Cons. ...	120–125	...	...
82,500	..	Aug. 28	7	7	Hastings & St. L. 5 p.c. Conv.	135–140	...	...
258,740	..	..	5½	5½	Do. 3½ p.c. Conv.	108–113	...	...
140,000	1	Apl. 24	‡10	‡10	Hongkong & China, Ltd. ...	31/- 33/-	+1/-	31/6–32/-
213,200	Stk.	Aug. 14	6	6	Hornsey Con. 3½ p.c. ...	120–125	..	...
5,600,000	..	May 22	10	14	Imperial Continental Cap.	210–220	−13	212–225½
225,130	..	Aug. 14	3½	3½	Do. 3½ p.c. Red. Deb.	89–94	...	92–93
235,342	..	Aug. 14	8½	8½	Lea Bridge 5 p.c. Ord. ...	167–172	...	...
2,145,907	..	Aug. 14	6	6	Liverpool 5 p.c. Ord. ...	126¼–127½	+½	...
245,500	..	June 26	5	5	Do. 5 p.c. Red. Pref. ...	103–113½	...	...
306,083	..	July 17	4	4	Do. 4 p.c. Deb. ...	99¼–101½	...	...
165,736	..	Aug. 28	10	8	Maidstone 5 p.c. Cap. ...	180–190	+2	...
56,176	..	July 10	3	3	Do. 3 p.c. Deb. ...	69–74	...	..
75,000	5	June 12	‡10	‡10	Malta & Mediterranean ...	9–11	...	10⅛–10⅞
392,000	—	Apl. 1	‡½	5½	Metropolitan (of Melbourne) 5½ p.c. Red. Deb.	98–103	...	...
231,978	Stk.	Aug. 28	5	5	M. S. Utility "C." Cons. ...	110–115	...	...
818,657	..	..	4	4	Do. 4 p.c. Cons. Pref.	91–96	...	...
112,126	..	June 26	4	4	Do. 4 p.c. Deb. ...	100–102	...	...
148,955	..	..	5	5	Do. 5 p.c. Deb. ...	118–118	..	...
675,000	..	21 May '31	‡6	‡6	Montevideo, Ltd.	53–63	−2	...
2,061,315	..	Aug. 14	5⅔	5	Newcastle & Gateshead Con.	25/–26/-*d*	+/6	...
682,856	..	..	4	4	Do. 4 p.c. Pref. ...	98–100*d*	...	...
776,706	..	July 10	3½	3½	Do. 3½ p.c. Deb. ...	91–93*d*	...	...
277,285	..	May 8	5	5	Do. 5 p.c. Deb. '43...	107–109*d*	...	...
274,000	..	Aug. 14	5	5	Newport (Mon.) 5 p.c. max.	100–102*a*	...	...
204,940	..	Aug. 28	7½	7½	North Middlesex 6 p.c. Con.	144–152	...	...
396,160	..	Aug. 14	5	5	Northampton 5 p.c. max. ...	101–106	...	...
300,000	..	Apl. 24	9	7	Oriental, Ltd.	114–119	...	...
316,617	..	June 26	8	8	Plym'th & Stonehouse 5 p.c.	166–171	...	165–166
504,416	..	Aug. 28	8	8	Portsm'th Con. Stk. 4 p.c. Std.	158–163	...	...
241,446	..	..	5	5	Do. 5 p.c. max. ...	102–107	...	...
114,000	..	Aug. 14	5	5	Preston 5 p.c. Pref.	101–106	...	...
686,312	..	July 24	4	4	Primitiva 4 p.c. Rd. Db. 1911	86–91	...	...
389,813	..	June 26	4	4	Do. 4 p.c. Cons. Deb.	82–87	...	...
150,000	10	Mar. 20	6	6	San Paulo 6 p.c. Pref. ...	6⅞–7⅛	...	...
1,736,968	Stk.	Sept. 11	6	6	Sheffield Cons.	126–129*e*	−1	...
95,000	..	July 10	4	4	Do. 4 p.c. Deb.	90–94*e*	...	...
133,201	..	Sept 11	5	8½	Shrewsbury 5 p.c. Ord. ...	132–137*	...	...
90,000	10	June 12	15	14	South African	5–5	..	...
6,709,895	Stk.	Aug. 14	7	5	South Met. Ord.	129–132	+2	129–131
1,135,812	..	..	6	6	Do. 6 p.c. Irred. Pf.	134–139	...	...
850,000	..	..	20/-*g*	4	Do. 4 p.c. Irred. Pf.	99–103	...	...
1,895,445	..	July 10	3	3	Do. 3 p.c. Deb. ...	76–79†	...	...
1 000,000	..	July 24	5	5	Do. 5 p.c. Red. Deb.	112–116	...	113½
209,820	..	Aug. 14	8½	8½	South Shields Con.	147–149*d*	+1	...
1,543,795	..	Aug. 14	6	6	South Suburban Ord. 5 p.c.	125–130	...	127–129
300,000	..	..	5	5	Do. 5 p.c. Pref.	112–117	...	115
300,000	..	..	—	4	Do. 4 p.c. Pref.	99–103	...	...
868,837	..	June 26	5	5	Do. 5 p.c. Deb.	118–123	...	...
100,000	..	‖	—	—	Do. 4 p.c. Deb.	102–105	...	...
647,740	..	Aug. 28	5	5	Southampt'n Ord. 5 p.c. max.	107–112	...	...
121,275	..	June 26	4	4	Do. 4 p.c. Deb.	99–104	...	102
350,000	..	Aug 28	5½	5½	Swansea 5½ p.c. Red. Pref.	107–111	...	...
200,000	..	June 26	6½	6½	Do. 6½ p.c. Red. Deb.	103–108	...	...
1,076,490	..	Aug 14	6⅔	6⅔	Tottenham and District Ord.	145–150	...	149½
300,000	..	..	5½	5½	Do. 5½ p.c. Pref. ...	121–126	...	123½
62,235	..	..	5	5	Do. 5 p.c. Pref. ...	108–113	...	...
199,005	..	June 12	4	4	Do. 4 p.c. Deb. ...	96–101	...	...
85,701	..	Apl. 3	6	6	Tuscan, Ltd., 6 p.c. Red. Db.	80–85	..	...
347,769	..	Aug. 28	7	7	Uxbridge, &c., 5 p.ct. ...	144–149	...	..
88,330	..	..	5	5	Do. 5 p.c. Pref. ...	110–115	+2	118
1,322,220	..	July 10	7	7	Wandsworth Consolidated	151–156	+6	149–156
1,096,373	..	..	5	5	Do. 5 p.c. Pref.	115–118	...	117–117½
1,317,964	..	June 26	5	5	Do. 5 p.c. Deb.	118–123	...	...
158,400	..	Aug 28	6A	6	Winchester W. & G. 5 p.c. Con.	107–112	...	..

Quotations at: *a*.—Bristol. *b*—Liverpool *c*. Nottingham. *d*.—Newcastle. *e*.—Sheffield. *f*—The quotation is per £1 of stock *g*—For quarter. *h*.- Paid £3, including 10s. on account of back dividends. ‖—The interest due 1/7/33 was paid on that date * Ex div. † Paid free of income-tax. ‡ For year. Hongkong & China, Ltd.- paid on £10 shares.

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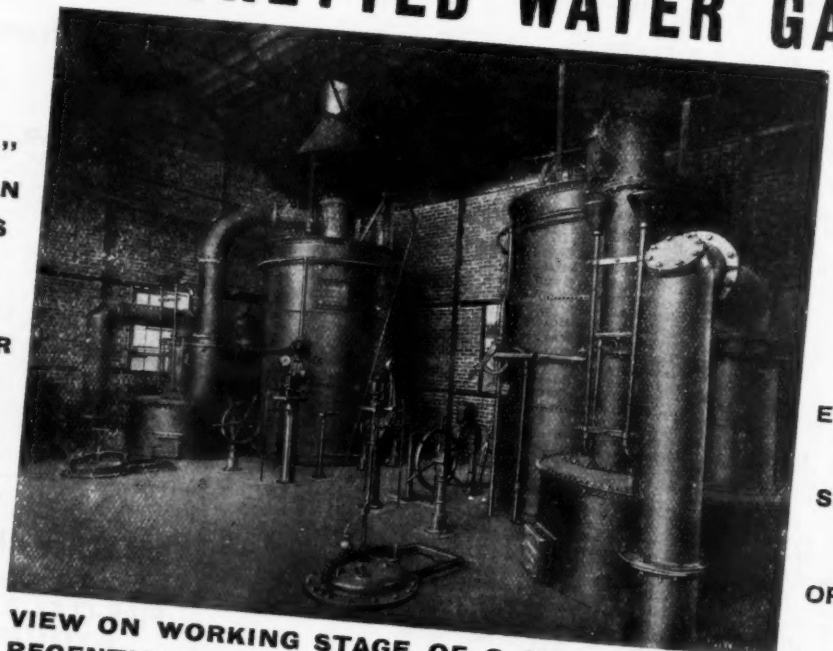

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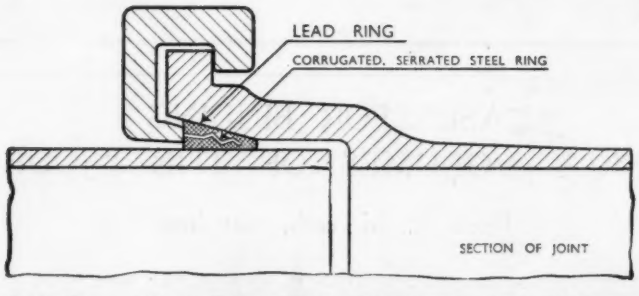

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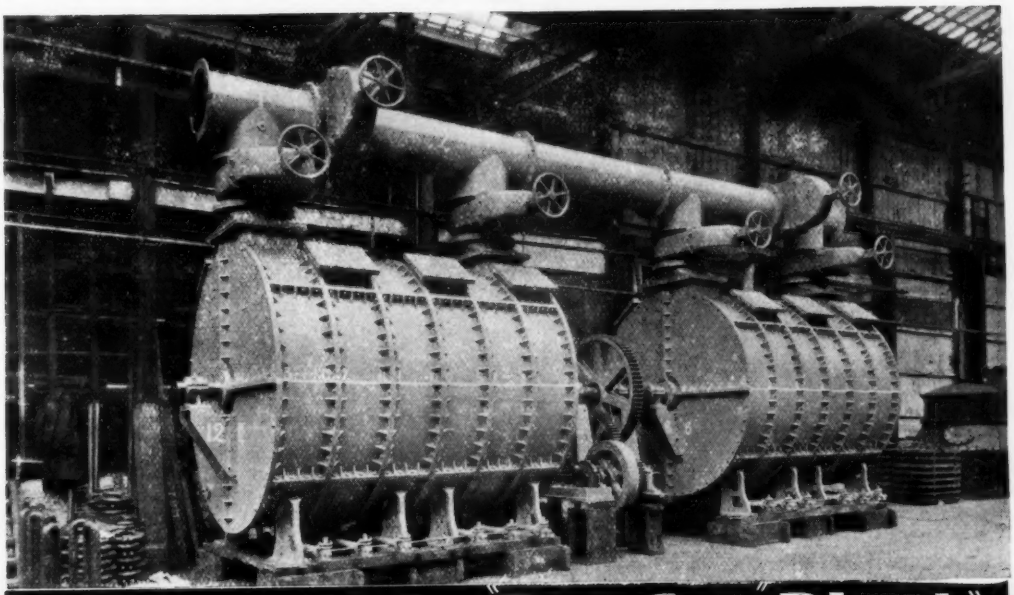

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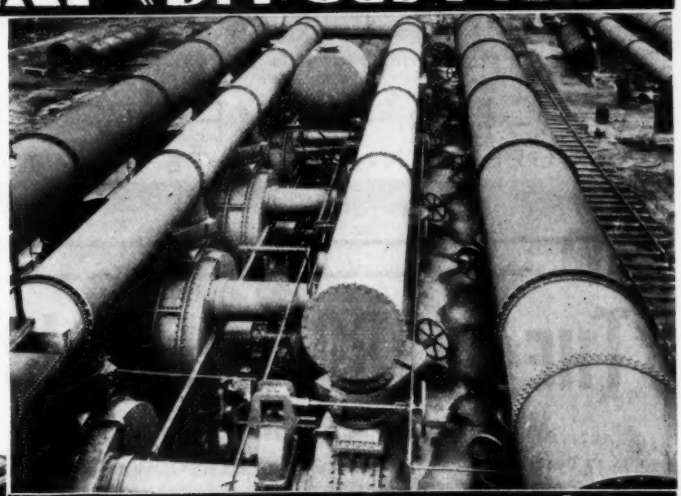

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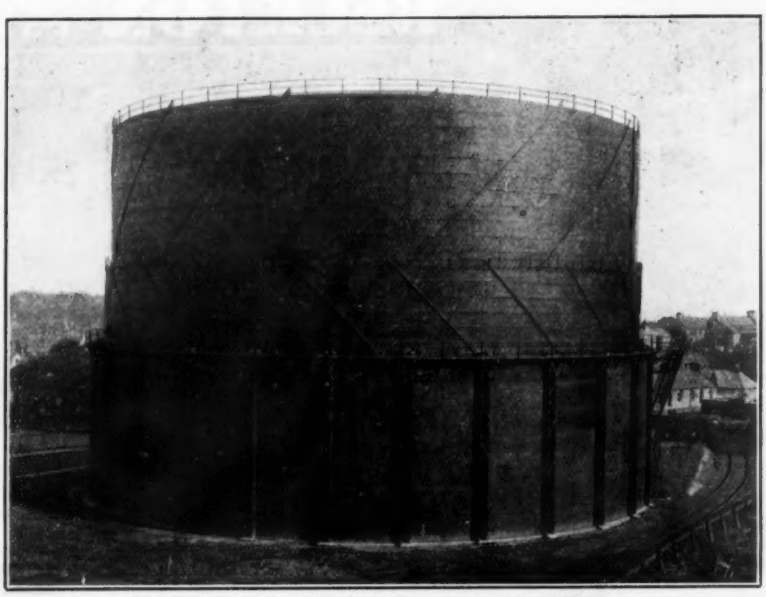

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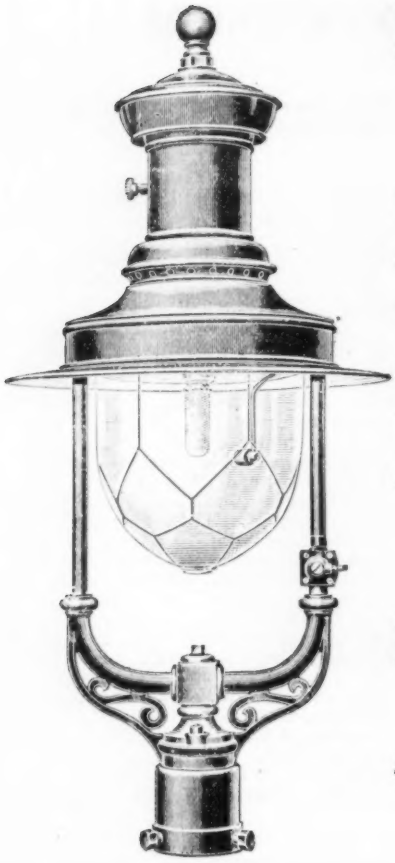

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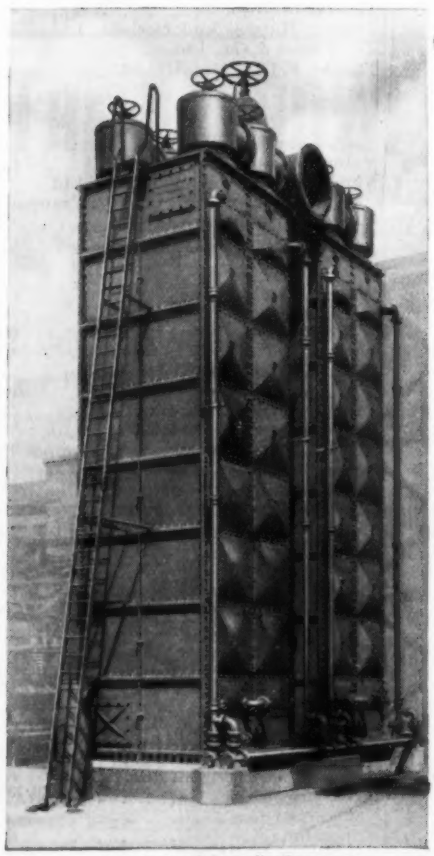

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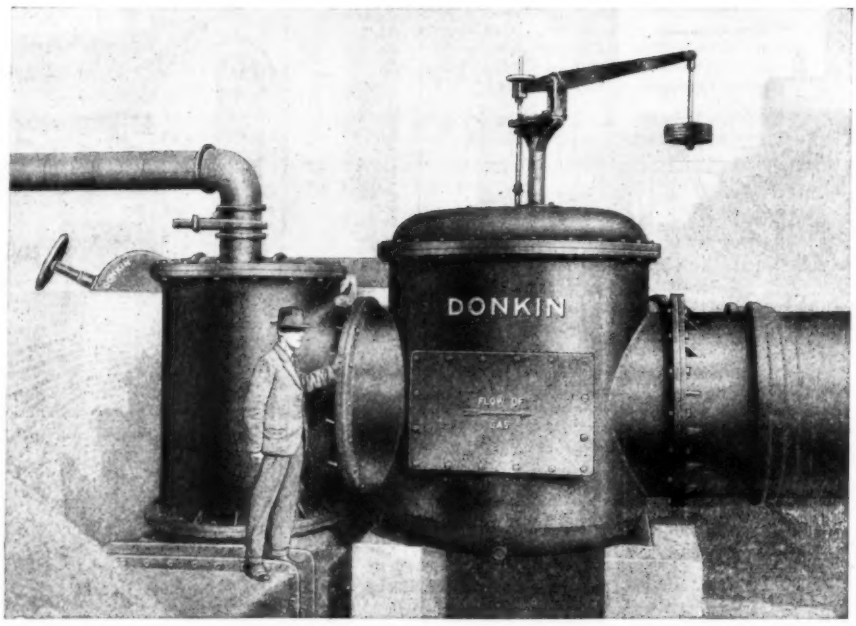

Fig. 817

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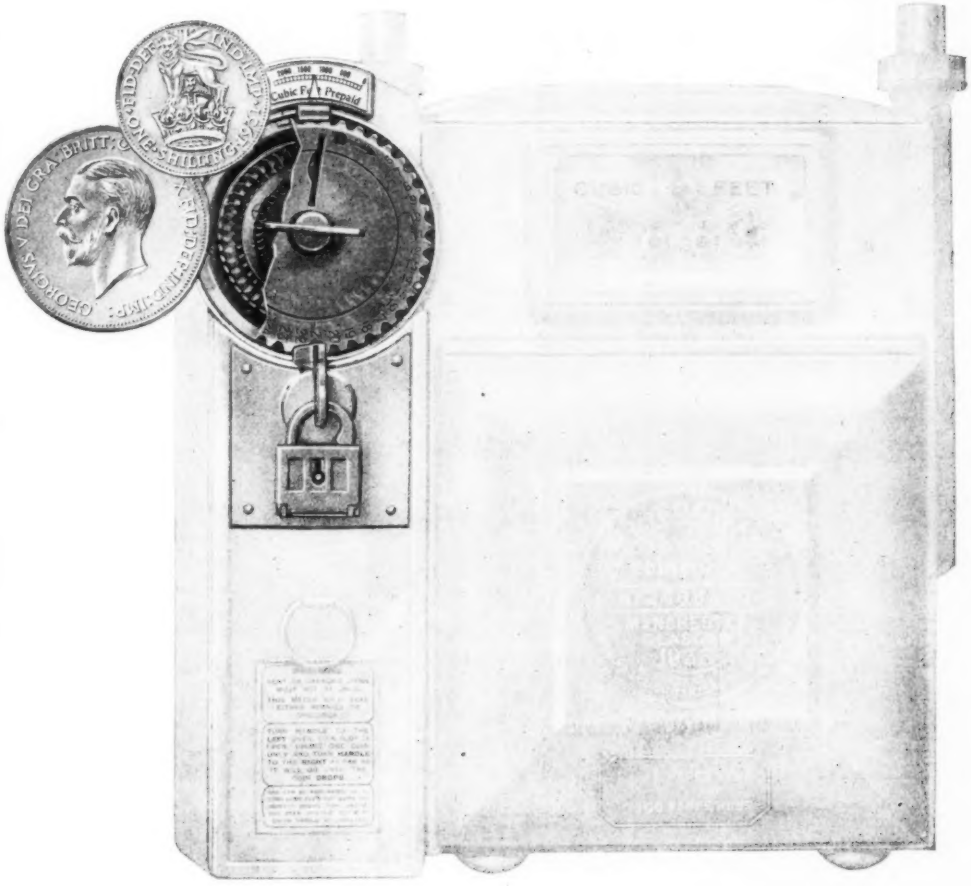

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FIG. 105

FIG. 256

FIG. 257

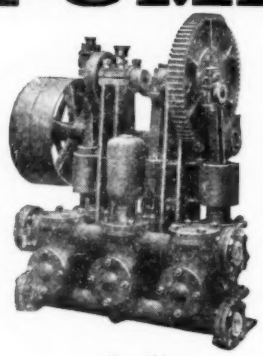
FIG. 942

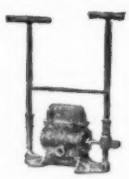
FIG. 127

FIG. 69

FIG. 294

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